ARMY INFORMATION DIGEST

AUGUST 1956

OFFICIAL U. S. ARMY MONTHLY MAGAZINE

ARMY INFORMATION DIGEST

OFFICIAL MONTHLY MAGAZINE of the DEPARTMENT OF THE ARMY

The mission of ARMY INFORMATION DIGEST is to keep personnel of the Army aware of trends and developments of professional concern.

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BRAVING broiling sun and wilting humidity, thousands of determined reservists are undergoing annual field training this summer. The largest number of men in National Guard history will train at 57 camps in United States, Puerto Rico, Alaska and Hawaii, and thousands of Reservists will be similarly engaged. Soldiers on the front cover are among those who completed two weeks training at The Engineer Center, Fort Belvoir, Virginia.

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ARMY INFORMATION DIGEST

AUGUST 1956

Volume 11

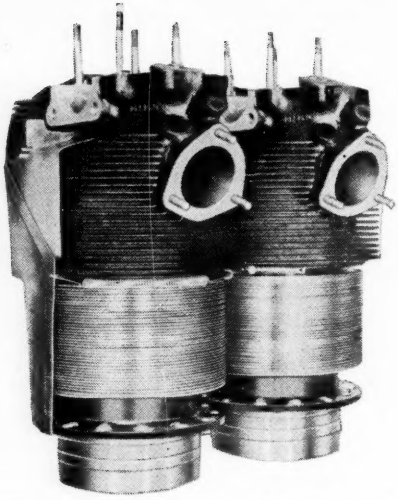
Number 8

In This Issue:

Ordnance Corps meets comb

AIR-COOLD FOR THE A

Lieutenant Colon W. O



This large bore "workhorse cylinder" is the basic unit which combines to make . . .

IN THE relatively short span of one decade the Army Ordnance Corps has designed, developed and produced a complete new family of air-cooled engines for the Army's tracklaying combat vehicle fleet. This accomplishment has not been an easy one.

During World War II, tracklaying vehicles were powered by a multitude of different engines, and this created extremely complex and almost unmanageable supply problems. Army troops had to maintain forty-eight different engines for the combat fleet, including tanks, self-propelled artillery, gun motor carriages and the like. Some were gasoline-powered; others were Diesels. Both air- and liquid-cooled versions were utilized, as well as different cylinder sizes. Interchangeability was practically nonexistent.

As a general rule, these engines were commercial types. In many cases two or more engines had to be connected to a common propeller shaft to obtain the required horsepower. And although the average commercial type power unit then available could be expected to give thousands of hours of trouble-free service in an automobile, the standard of performance in combat vehicles was a maximum of *400 hours* or *4,000 miles between major overhaul periods.* As a matter of fact, many changes in design and materials were required even to reach this standard due to the rigors of combat service in all types of climate and terrain.

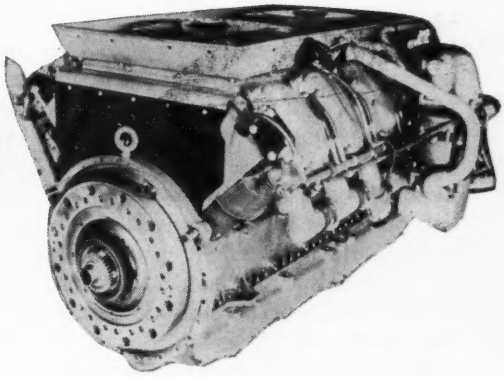
Admittedly, there was no alternative at the time. Engines were needed fast and in large quantities to supply the Nation's preparedness needs. Those types immediately

LIEUTENANT COLONEL W. O. MILLER, Ordnance Corps, is on duty with Tank and Automotive Branch, Research and Development Division, Office of the Chief of Ordnance. He is author of "Ordnance Testing Shows the Way" in the January 1956 DIGEST.

combat need by standardizing

LD ENGINES
HE ARMY

Colon W. O. Miller



. . . various sized air-cooled engines which power the Army's combat vehicle fleet.

available were pressed into service. The net result was a logistical conglomeration in the field.

To insure that such a condition would not reoccur, the Ordnance Air-Cooled Engine Development project was formally initiated in 1943. Today results of this program are a successful reality, portending even greater benefits for the future.

WHY AIR-COOLED ENGINES?

COMPACTNESS and lightness are two attributes especially desirable in combat vehicle engines. But these very features are not always to be found in commercially available engines, especially in the larger horsepower sizes.

Normally it is not possible to take a commercial engine off the shelf, utilize it in a tracklaying vehicle and expect to obtain satisfactory performance. Carburetor and lubrication changes must be made to meet the 60-percent-slope operating requirement. Built-in dust protection, waterproofing and radio suppression features are necessary. Ignition system, starter, and generator, too, must be designed for simplicity and ruggedness in cross-country operation. Design changes are generally required if the engine is to fit in the small space available. Moreover, the cooling system must be adapted to meet military requirements, so that the engine operates satisfactorily in temperature extremes from $-65°$ to $+125°$ F.

AIR-COOLED engines offer many advantages which have been borne out both in engineering tests and field experience. Major advantages include:

Interchangeability. Contrasting with the block-type cylinder arrangement usually required for liquid cooling systems, air-cooled engines normally are constructed of separate cylinder units. Thus, it is possible to utilize a unit cyl-

inder, with its unit piston, ring, rod and bearing, in any combination from a single cylinder to a 12-cylinder engine. This makes the "family of engines" concept possible. As a result, too, interchangeability is facilitated, and supply and maintenance problems are reduced.

Today one basic cylinder size—the 5¾" bore and stroke—is used to power the major portion of the Army's combat vehicle fleet. Engines of this cylinder size are actually the "workhorses" powering the Army's tracklayers.

The 6- and 12-cylinder versions of this engine size are used in sixteen different combat vehicles. Interchangeability is not limited to such inconsequential items as nuts, bolts, washers, clamps and seals, but includes such major components as pistons (including rings and pins), cylinder barrels, bearings, intake and exhaust valves and guides, valve rocker assemblies, connecting rods and magnetos.

Already, one hundred percent interchangeability of high mortality engine parts has been accomplished, and far reaching gains have been made in standardizing *all* tank-automotive equipment. In World War II, for example, some 36,550 different spare parts for vehicles were stocked. Today's requirements have been cut to 8,500—a 77 percent reduction. The Air-Cooled Engine Family concept has contributed materially in making such standardization a reality. As a result, the logistics burden has been lightened and savings of millions of dollars have been achieved.

Space Engineering. The striking accomplishments in space engineering and weight savings are best illustrated by comparing the standard liquid-cooled World War II 90-mm. Tank engine with the present air-cooled 90-mm. Gun Tank. The power package of each consists of the engine and transmission along with necessary accessories. Both engines weigh approximately the same—3399 and 3392 pounds respectively. But while the World War II engine generated 500 horsepower, the present air-cooled engine delivers 810. Thus the old unit weighed 6.8 pounds per horsepower, compared with 4.2 pounds per horsepower for the present air-cooled type.

When power package weights are compared, the difference is also striking. The World War II type weighs 8,000 pounds, the present type only 6,850 pounds.

Maintenance, too, has been simplified. The World War II type required eighteen man hours of labor to remove the power package assembly; the air-cooled type takes only four hours. These engine weight and space savings have made it possible to produce lighter and smaller combat vehicles.

Low Temperature Operation—Air-cooled engines normally have better starting characteristics at low temperatures because there is less mass to be heated and heat transfer is good. No water or antifreeze is required—a desirable advantage.

High Temperature Operation—With the passage of time, it becomes more difficult to cool a liquid-cooled engine because of internal clogging and rust formations. No such action takes place in an air-cooled engine. Experience in Africa in World War II and subsequent test operations in Yuma, Arizona, have demonstrated that air-cooled engines require only

about one-half the cooling air circulation to maintain safe temperatures, as compared with liquid-cooled engines.

Reduced Vulnerability—Air-cooled engines are less vulnerable to gunfire, and can frequently continue operating after being hit. Loss of water, on the other hand, normally renders liquid-cooled engines inoperative.

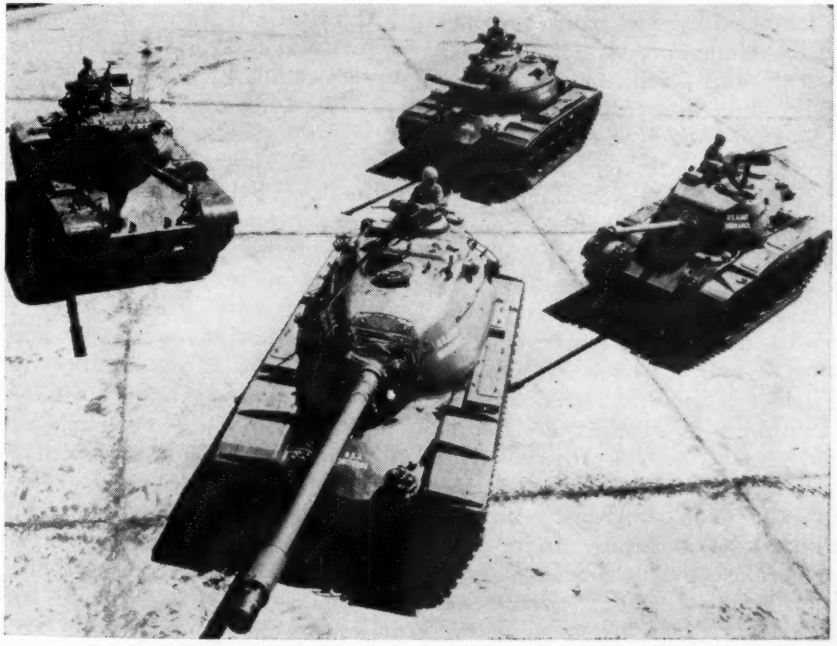
COST FACTORS

INASMUCH AS the civilian economy utilizes liquid-cooled engines in the overwhelming majority of its trucks and passenger cars, it is generally cheaper to use this mass-produced type of engine for military application, provided military characteristics can be met by modifying the basic engine. This is generally done in the case of wheeled vehicles.

But for heavy vehicles (especially tracklayers), engines in the 300-horsepower class and above are required. These are not readily available on the commercial market, especially in the compact sizes required. Accordingly, it is largely in this area that air-cooled engines have been developed for Army use.

In any comparison of costs between liquid- and air-cooled engines, the rate of production is a most important factor. A recent survey has shown that a basic 1790-cubic-inch air-cooled engine and a liquid-cooled unit of the same size can be built for substantially the same cost. In other words, there is no significant difference in cost between liquid- and air-cooled en-

More power, less maintenance costs are features of Ordnance air-cooled engines which power these units of the Army's tank family.



gines in similar horsepower ranges *provided tooling and production rates are also similar.*

DESIGN FEATURES

ORDNANCE air-cooled engines currently in use range from a 1-cylinder developing 17 horsepower to a 12-cylinder version which produces 1025 horsepower.

While three basic bore sizes are utilized, one of these—the 3⅝" size—is actually an auxiliary engine for electrical generation. Thus the complete family consists of two basic cylinder sizes—5"x4" and 5¾"x5¾"—which are utilized for combat vehicles and large trucks.

Quality Built In. All the requirements for peak performance, endurance and reliability are built into the Ordnance air-cooled engine series. Interior and exterior alike are distinguished by basic qualities that denote a well-designed engine. These built-in features include:

Crankcase and oil pan are of one-piece aluminum, which permits casting and results in a relatively lightweight unit.

A steel forged crankshaft is utilized, sufficiently rigid to keep vibration to a bare minimum.

Aluminum alloy pistons reduce weight and energy required for movement.

Aluminum is also employed in the muffs (fins) which are cast to the steel cylinder barrels to provide efficient surface for air cooling.

Piston rings are chrome-plated to reduce wear and to provide longer engine life and minimize oil use.

Sodium-cooled exhaust valves are utilized. This improved type runs cooler, lasts longer and maintains a high level of engine output and economy.

Stellite (cobalt-chrome) facing on valves insures longer parts life.

Engine friction is kept to a minimum by the relatively short stroke and low piston speed.

Moving parts are lubricated by a reliable high-output oil pump, while oil is filtered by a large-capacity oil filter.

The ignition system is waterproofed and radio-shielded (suppressed). To insure utmost simplicity and reliability, a magneto (rather than battery) ignition system is utilized.

These and many other built-in features enable the present family of Ordnance air-cooled engines to operate with a minimum of maintenance in temperatures ranging from −65° F. to +125° F.; to negotiate 60-percent slopes; and even to operate submerged by adding intake and exhaust air vents.

PERFORMANCE RECORD

ALTHOUGH air-cooled engines were used in World War II, the present family of engines was first introduced in combat during the very early phases of the Korean War. M46 Medium Tanks powered with air-cooled engines were sent to Korea even before all known development and production changes could be made. In spite of this, engine performance in all types of weather, over dirt roads, mountainous trails and cross-country was generally considered satisfactory.

Since 1950 numerous modifications have been made in the entire family, to produce a very reliable engine with a longer life than earlier types. Today air-cooled engines are utilized in twelve standard vehicles, and eight more are under consideration to be type clas-

sified as standard in the near future. In addition, many new design vehicles utilize air-cooled engines.

FUEL CONSUMPTION

THE FACT that tracklaying vehicles are voracious consumers of fuel is well known to tank crews and logistics planners alike. But contrary to popular impression, this high rate of fuel consumption is not a measure of engine efficiency. Rather, it is a measure of the efficiency of the *complete vehicle system* which includes the transmission, final drives, tracks, suspension, and the type of operation.

The latter factor is extremely important. In a commercial-type vehicle operated in city traffic, for example, fuel consumption is usually considerably higher than on the open road. In the case of a 40–50 ton combat vehicle, which has a 12-cylinder engine with automatic transmission and operates in low range for considerable periods of time, the same factors apply, but in larger proportions.

In tests of two identical vehicles (one equipped with a water-cooled engine, the other air-cooled) the results were almost identical, indicating that there is no significant difference in fuel consumption between comparable water- or air-cooled engines.

An even more accurate method of determining fuel consumption characteristics consists of placing the engine on a test stand (dynamometer) and operating it for one hour or more at a particular throttle opening. This test (which measures the fuel consumed in pounds per horsepower per hour) puts all engines on a common basis for comparison purposes.

Comparative studies indicate that while the engines may differ on an individual basis, from an overall average there is no difference as far as minimum specific fuel consumption at full throttle is concerned.

When idle fuel consumption is considered—and this is important in combat operations, especially in cold weather—the air-cooled engine actually requires less fuel. Large-bore (5¾″ bore and stroke) air-cooled engines use considerably less fuel at idling than do their liquid-cooled counterparts utilized in combat vehicles during World War II.

In Europe, where fuel economy and costs are stressed a great deal more than in the United States, air-cooled engines (both gasoline and Diesel) are utilized on a rather large scale. Last year one German firm announced completion of its 100,000th air-cooled Diesel.

FUTURE TRENDS

AS ITS continuing goal, the Ordnance Engine Program seeks to produce engines of smaller size and lighter weight which have maximum reliability and operate with the lowest possible fuel consumption. A continuous redesign and development program is underway.

The principle of *fuel injection in lieu of carburetors* is now being applied to the Ordnance family of engines. Not only does fuel injection enable the engine to develop greater horsepower output while reducing fuel consumption, but cold weather operation is improved by elimination of carburetor icing. Field tests have shown that a fuel saving of approximately 8 to 20 percent (depending on type of operation and engine) can be obtained by using fuel injection in combat vehicles. The tendency of the en-

gine to develop hydrostatic lock is also overcome since manifolds cannot be overloaded with fuel when the new system is used.

Fuel injection makes possible improved fuel economy by assuring proper mixing of the air-fuel combination. Injection nozzles, one for each cylinder, are located in the engine intake ports and aligned so that the fuel will spray through the open intake valve and into the cylinder as the air charge is drawn in. Thus each cylinder receives the correct amount of fuel required for the prevailing operating condition. No cylinder receives a lean or rich mixture or the incorrect amount volume-wise—a condition all too common in carburetor systems.

With the fuel injection system, each cylinder delivers maximum output. There is less likelihood of some cylinders being underworked as in carbureted systems, especially when long manifolds are used.

As a step toward size and weight reduction, the present trend is to utilize the *horizontally-opposed cylinder configuration.* Two engines for combat vehicles in the larger horsepower ranges are currently being developed which will materially reduce space requirements and permit lighter vehicle design.

Improvements are also being made in manifolding, timing, cooling, and simplified maintenance. Elimination of supercharging and accessory cases are also part of the program. Another interesting innovation designed to reduce fuel consumption is a "skip-firing device" which permits gasoline to bypass the cylinder during idle operations so that each cylinder fires once, then misses on the next stroke. Since combat vehicles sometimes idle for long periods, this feature would reduce fuel consumption while idling nearly 40 percent.

The Atomic Age with its emphasis on dispersion and air transportability, has accentuated the problems of Ordnance planners. The dispersion so necessary to provide adequate protection from atomic attacks also increases the logistical burden, and adds to fuel consumption. To provide adequate mobility lightweight vehicles must be produced which can be air-lifted and in some cases air-dropped.

An aggressive compression ignition (diesel cycle) engine program is currently being conducted. This program calls for developing an air-cooled, multi-fuel engine for use in combat vehicles. Objective of this program is to produce an engine that will use 35 to 40 percent less fuel than existing models, yet operate on various fuels (gasoline, diesel, JP–4, and the like) without any change in performance or fuel consumption. This development appears to be very promising and pilot models will be available for test in the near future.

PRESSING toward these goals, Ordnance designers are now investigating several new and promising engines. Most of these are already in the "hardware" stage, and results look promising. When these engines finally reach production they will be lighter, smaller, and consume less fuel than existing models. They will also utilize one basic cylinder size, thus making it possible to build engines ranging from one through sixteen cylinders, with maximum interchangeability. And certainly they will be air-cooled.

Leaders or Readers?—Are

PUBLICATIONS— Curse or Blessing?

Colonel B. W. Saurel

IN THE course of a year, about 10,000 different Department of the Army publications are printed. They approximate 240,000 printed pages. When ordered in the quantity required to supply an initial distribution to users and to maintain stocks for resupply, they weigh 15,500 tons. The printing bill is 20 million dollars!

Are these publications a curse or a blessing? Do they help advance the Army's mission or are they training *readers* instead of *leaders?*

At the same time that these 240,000 pages appearing in 10,000 publications are being printed, 8,000 publications comprising 160,000 pages are being rescinded. The difference—2,000 items and 80,000 pages of print—is added each year to the Army's stock of publications. Why? Is all this necessary? Do we have too many publications? Are our publications too lengthy?

Let's look at the facts. Eighteen months ago, the Army had 31 dif-

COLONEL B. W. SAUREL, Adjutant General's Corps, is Chief, Publications Branch, Office of The Adjutant General, and Secretary, Department of the Army Publications Board.

ferent publications media, 30,000 publications, 1,075,000 pages. Today, there are 26 publications media, 33,000 publications, 1,200,000 pages. But despite the upward curve, let's not jump to conclusions!

Technical Manuals comprise almost half of the page total. A year and one-half ago, the Army had 500,000 pages of Technical Manuals. Today, it has 560,000 pages. Thus, when prorated on a twelve-month basis, some forty thousand of the 80,000 pages *annual* increase is in Technical Manuals.

But look at the contents of these manuals. Which should be eliminated? Every manual, it must be remembered, is screened for essentiality and every item is needed! Perhaps *you* may not be interested in 370 pages on the Buda Diesel Engine, but the information is vital to Engineer Field and Depot Maintenance Companies, Engineer Depot and Parts Depot Companies—to those concerned with the operation and maintenance of the Diesel engine. Every one of the Army's 5,625 other manuals is similarly needed by some element or activity.

Then perhaps there are too many pages! How many of the 560,000 are actually necessary? Examine these manuals more closely. If you entertain the notion that there is too much "palaver" which could be eliminated, you may be in for a surprise. It is all too easy to dismiss those publications not needed in your operation as being too wordy, too detailed, but look at the manual *you* need. Do you find it too verbose? Or isn't it detailed enough? Can it be that you are applying different standards for different publications?

Puzzled? Let's check further. Eighteen months ago publications in the Supply Manual category filled 312,000 pages. Today, they encompass 367,000 pages—or 30 percent of our total of 1.2 million pages. Thirty-seven thousand of the 80,000 pages of *annual* increase is in Supply Manuals. Can we eliminate any?

A 380-page manual on field and depot maintenance allowances for the 155-mm., M44 (T194), Self-propelled, Full-tracked Howitzer may not be of specific interest to me or to you, but some Ordnance Companies, Battalions, Depots and Arsenals have a wholly different notion as to its essentiality. Similarly, there is a proven need for every one of the Army's 10,760 Supply Manuals.

ARE there, then, too many words and pages? Look at the format. How much could be blue-pencilled as excess? Even in this area the writers have beaten us to the punch. They have used the blue pencil liberally. And while they may not have eliminated every excess word, certainly they have made a sizable cut.

Consider several more facts. Supply Bulletins and Technical Bulletins, 18 months ago, took 45,000 pages. Today, these two media take 69,000 pages. When the 24,000 increase is pro-rated on an annual basis, we find that 16,000 of our annual 80,000-page increase is in these two media.

Reviewing our arithmetic, we find that each year some 80,000 pages of publications are added in our 26 publications media. Each year, 40,000 pages of Technical Manuals, 37,000 pages of Supply Manuals, and 16,000 pages of Sup-

ply and Technical Bulletins are added. *But all this adds up to 93,000 pages.* Is there a discrepancy somewhere?

Regulations and Pamphlets formerly filled 73,000 pages. Today, 18 months later, they take 54,500 pages—a *reduction* of 18,500 pages or about 12,300 fewer pages when prorated *annually.* The remaining 20 publications media account for the additional 700-page reduction annually.

What is the picture now? In four media—Technical Manuals, Supply Manuals, Technical Bulletins and Supply Bulletins—93,000 pages are added each year. In two media, primarily administrative—Regulations and Pamphlets—we *eliminate* 12,300 pages. In the other 20 media the annual reduction totals 700 pages. That accounts for the 80,000 new pages each year.

True, all of us do not require publications in the four media in which 93,000 pages are added yearly. But each such publication is definitely needed by some unit or activity. Would *you,* for example, advocate the elimination of these publications because they are not needed in *your* particular unit?

The solution to this problem, then, does not lie in banning the printing of essential publications on new equipment, new doctrine, or new management concepts. Indeed, it is even conceivable that, by 1966, the volume of pages of publications could increase from our present 1.2 million to 2 million as a result of our fast changing technology.

There are two avenues of attack on this problem. One of them is at Department of the Army level; the other is at the individual level.

At Department of the Army level the rule is being applied that, if there is nothing new to say, there is no need for a publication.

Although great progress has been made in reducing administrative publications—*i. e.,* Regulations and Pamphlets—much more *can* be done. Last year's reduction of 12,300 pages is not enough. The biggest field for improvement, though it constitutes only 5 percent of the total number of pages of publications, remains in the administrative area.

EXCESS verbiage is "verbal garbage." The blue pencil must continue to be used liberally to cut out every possible extra word. Here again, the most fertile field for improvement is in administrative publications. In many cases, these are written in too great detail; they are repetitive; they contain much nonessential historical background; they bombard commanders with words and more words.

At Department of the Army level, elegance of expression must be subordinated to clarity. Any new ideas must be stated simply, without elaboration. Detailed and learned dissertations are to be avoided, and repetition too. Phrasing of directives and regulations must be in broad terms so that commanders are not deprived of their function to think and to exercise judgment.

But why so much concern about administrative publications? Hasn't considerable improvement been effected in these media which, after all, constitute only about 1/20th of all publications pages? Actually, administrative publications are the 5 percent most widely read and

used. Because of the large audience they reach, further improvements in Regulations and Pamphlets offer the best opportunity for pay-off.

The total number of pages of publications can be a frightening statistic unless it is recognized that these pages, though available, need be read *only by those who have a requirement for them!* This brings us to the second avenue of attack on this problem—namely, what *you* as an individual can do about it.

Do you find yourself reading too many pages of official publications unrelated to your needs? Don't gripe; you can do something about it. Look into the reasons why all this material reaches you. Do you ask to see everything? Do you express personal interest in some subjects? Are you getting material because you would "like-to-know" rather than because you "need-to-have"? If so, *you* can correct the situation. Stop asking for publications you don't need for the performance of your mission. In addition, look into the processes by which publications reach you. Who procures them for you? How many copies are being requisitioned? On what basis is the distribution being made? You may find that most of your reading problem can be resolved within your own unit.

Much has been accomplished at Department of the Army level in the last 18 months to ease the publications problem. (See "More Efficient Administration," October 1955 DIGEST.) Among achievements to date:

- 31 publications media have been reduced to 26.
- DA Letter directives have been reduced 90 percent. Teletype changes to administrative directives have been reduced by half.
- Army Regulations and DA Pamphlets total pages have been reduced by 25 percent.
- With very few exceptions, distribution of publications across command lines has been discontinued.

Despite this excellent record of progress, more needs to be done, particularly at the individual level. What *you* can do offers the greatest opportunity for solving much of the reading problem.

In this day of change, new equipment will require more and more publications on operation, maintenance, and repair. The Army's library of essential literature *must* grow. *But that doesn't mean that you personally have to read all that's printed!*

Each publication, it should be clearly evident, is beamed at a selected audience. The recommended distribution is the Department of the Army's estimate of that audience. But it is at the local level that final action must be taken to insure that those who need the publication actually get it, and that those who do not require it are not burdened with it. If you get a publication you don't need, check into it. You can stop it!

Publications can be *curse* or *blessing*. You can be *reader* or *leader*. The choice is yours.

Your Date with History

A Calendar of Army Anniversaries

3 Aug 1861 . . . Army retirement system inaugurated on a limited scale.

4 Aug 1920 . . . Finance School established.
1947 . . . Medical Service Corps established.

5 Aug 1861 . . . Congress abolished flogging in the Army.

6 Aug 1945 . . . First combat atomic bomb detonated over Hiroshima.

7 Aug 1782 . . . Order of Purple Heart established.
1789 . . . War Department officially organized.

9 Aug 1945 . . . Second atomic bomb dropped on Nagasaki.

10 Aug 1915 . . . First military instruction camp for businessmen opened at Plattsburg, New York.
1945 . . . Japan sues for peace.

13 Aug 1917 . . . Army Corps of Intelligence Police (Counter Intelligence Corps) established.

15 Aug 1855 . . . Army cap replaced by a black felt hat with black feather ornament; three for field officers, two for company officers, one for enlisted men.
1914 . . . Panama Canal, built by U. S. Army Engineers, opened.

16 Aug 1903 . . . First Chief of Staff of United States Army, Lt. Gen. Samuel B. M. Young, took office.

17 Aug 1803 . . . Fort Dearborn established on site of Chicago.

20 Aug 1783 . . . Troops under General "Mad Anthony" Wayne won Battle of Fallen Timbers, dislodging Indians near present site of Toledo.

24 Aug 1912 . . . Quartermaster Subsistence and Pay Departments consolidated and renamed Quartermaster Corps.

25 Aug 1917 . . . 82d Airborne Division activated as an infantry division.

31 Aug 1898 . . . Volunteer Army in Spanish-American War reached 216,029.

Regular and Temporary personnel procurement for the

ARMY OFFICER CORPS

Part II—World War II to the Present

"AS ONE HORSEMAN to another," General George S. Patton, Jr. wrote shortly after VE Day to General Thomas T. Handy, then Army Deputy Chief of Staff, . . . "you will remember that at the close of the last war we lost the cream of the temporary officers, due to the fact that we took too long in deciding whether or not they could stay in the Regular Army. The same thing is starting to happen here now, and we are apt to lose some very outstanding battle-tried young officers, because, being efficient and ambitious, they cannot wait around for a decision as to their future in the Army. . . . Certainly we should do something as quickly as possible, . . ."

SUCH THINKING on the part of top-level Army officers together with eager inquiry from thousands of World War II temporary officers combined to speed up greatly the planning and implementation of the largest and most important Regular officer augmentation in the Army's history.

The pool from which needed new Regulars were to be obtained consisted of more than nine hundred and fifty thousand temporary officers mobilized from a number of sources to prosecute the war. The group was made up of National Guard of the United States officers; Army Reserve officers; Reserve Officers Training Corps (ROTC) graduates; Officer Candidate School (OCS) graduates; men who earned battlefield commissions; and those commissioned directly from civil life, usually specialists who brought with them sorely needed skills.

The majority of Regular officers now on active duty originally received their commissions from one or another of these sources. Of the above, only the National Guard and the ROTC were active in providing Regulars during the period following World War I and preceding World War II—and only on an extremely limited basis.

Following the post-World War I augmentation of nearly six thousand officers in 1920 and 1921, growing public apathy toward the

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military establishment combined with a national administration pledged to rigid economy had once more made West Point almost the sole source of Regulars. The two decades between 1920 and 1940 were years of uneasy peace. Japan became a menace to world security in the Orient, and Germany rose once more to threaten the peace of Europe; still, the United States refused to prepare itself for the contingencies that loomed on the horizon. Appropriations for defense were grossly inadequate. The Army languished.

Some relief from this situation occurred in 1933, with the establishment of the Civilian Conservation Corps (CCC) and the designation of the Army as the agency charged with its organization and administration. This had the effect of focusing public attention on the Army, and also on the Officers Reserve Corps as its important adjunct. Thousands of Reserve officers were ordered to extended active duty with the Regular Army to assist in the program. The military advantages of this were multiple. The Reservists were brought into closer contact with the Regular Army and provided with an opportunity to observe as well as to participate in administrative duties and training activities—something they had previously been deprived of through lack of funds.

The CCC program also stirred up sufficient interest to contribute substantially toward the passage in 1935 of what was to be popularly known as the Thomason Act. Under its provisions, one thousand Reserve second lieutenants were ordered to active duty for one year, and from this number fifty (later one hundred) were selected each year for commission in the Regular establishment. A dual purpose was thus accomplished—the Regular Army obtained a limited number of outstanding officers annually, and it was able to provide intensive training to a substantial number of Reserve officers, thus improving the Nation's mobilization base.

A majority of the Thomason Act applicants were ROTC graduates who, in addition to a college education, had already had at least four years of military familiarization. They were put through rigorous training and given detailed instruction in garrison schools—all under closest scrutiny. Before being appointed Regulars, they were required to appear before a board of officers convened to examine them and to report upon their fitness. Final selections were made at the War Department level based on detailed study of records.

THE ROTC in time was to assume ever-increasing importance as a procurement source for Regular officers despite the fact that prior to World War II, the Thomason Act route was the main avenue open. Thousands were to be selected en masse during the post-war augmentation; and later the ROTC was to make a steadily increasing contribution until today it has become the largest single source of Regular officer procurement.

During the interval between the wars, the ROTC movement flourished as a result of liberal legislation and wise planning in the War Department. But again, these measures were predicated largely on the supposition that graduates of the program were to be ear-

marked primarily for the Reserve and for utilization only in time of war or national emergency.

The National Guard similarly proved to be an important training ground for future Regulars and many fine Guard officers likewise were destined for appointment during the 1946–7 augmentations. Here, as in the ROTC, the Army's forward-looking peacetime policies —*i. e.*, assigning its finest officers to supervise civilian component training, and supporting such programs by other means—paid big dividends.

DESPITE the important contributions that were to be made by these peacetime-trained officers, they numbered in the thousands only; yet officer requirements to prosecute World War II were to reach into the hundreds of thousands—to a million! Even more fantastic was the fact that this tremendous increase was to be built around a nucleus of only about 14,000 Regular officers. Indeed, between 1938 and 30 June 1941, various Acts of Congress had only provided for an increase in the strength of the Regular officer corps from 12,374 to 14,016.

From the end of Fiscal Year 1940 until 30 June 1945, a total of 3,764 officers were appointed to all arms and services of the Regular Army. Of this number, 2,584 were graduates of the United States Military Academy. Of the 1,180 appointed from other sources, most came in under the Thomason Act as amended or from among ROTC Honor Graduates.

The operation of AR 605–5 (which provided for commission in the Regular Army from sources other than West Point) was suspended early in 1943, and for the most part appointments were not resumed until the post-war augmentation program was initiated early in 1946.

During the war interval, however, procurement of temporary officers—thousands of whom would later win Regular appointments—reached undreamed-of proportions. Aside from the National Guard of the United States, Army Reserve and ROTC, additional temporary Army ground officers were obtained largely by three methods: the Officer Candidate School (OCS), battlefield appointment, and direct appointment—the latter almost exclusively for specialists.

THE OCS program of World War II was the successor to the Officer Training Camps concept of appointing temporary officers applied in World War I. This tremendously important leadership operation—which was ultimately to produce 285,000 second lieutenants (not counting some 250,000 aviation cadets)—actually began about six months before the attack on Pearl Harbor. Following passage of the first peacetime draft in United States history, General George C. Marshall issued an implementing directive to Mobilization Regulations which enabled qualified enlisted men to become officers by successfully completing courses of instruction at "Officer Candidate Schools."

This policy of opening up commissioned status for large numbers of enlisted men was implicit in the American doctrine of equal opportunity for all. Those commissioned under this system represented a cross-section of American society. They included college graduates

and men who had not had an opportunity to finish grammar school whose potential was first developed by the Army; there were lawyers, bankers, manufacturers, writers, machinists, truck drivers, and butlers, among others. Almost any session of any Officer Candidate School was a melting pot of educational, occupational, ethnic, and religious backgrounds. There was but one common denominator—leadership ability.

Each of the combat arms and all but one of the technical and administrative services had its own Officer Candidate School. Physicians, of course, were not sent to OCS. But expert accountants went off to learn the intricacies of the Army's fiscal methods; electricians of superior skill and long experience were enrolled in the Signal Corps OCS and found that they still had much to learn; the Adjutant General's Department trained thousands of men in the requirements of Army paperwork. All of these, and many others, received intensive specialized training.

Of supreme importance were the many thousands of battle leaders turned out by schools maintained by the combat arms.

The Air Corps, designated in 1942 as the Army Air Force, had maintained its own officer training program for several years prior to the expansion of 1940. With the onset of the emergency this program to train pilots, navigators, and bombardiers was greatly expanded upon, and its scope and importance paralleled that of the Army's ground and service forces.

Yet, from the beginning of hostilities, the Army required many officers possessing skills, experience and professional competence in a variety of critical specialties. The nature of these was such that it would be impossible to obtain these specialists via existing officer procurement sources. A supplementary procurement program was therefore indicated.

DIRECT appointment from civil life proved to be the answer. But in order to avoid the pernicious abuses which had existed earlier in the Nation's history—and in recognition of the excellent results obtained during World War I when combat commissions were strictly denied civilian applicants not qualified by rigorous formal training—the Secretary of War early set forth strict governing policies, as follows:

"*First*—No such commissions should be given to men who would otherwise be liable for service under the draft, with the exception of those who have completed duly constituted courses leading to Reserve commissions.

"*Second*—All political or personal considerations should be rigidly excluded.

"*Third*—That commissions should only be given where the individual has special qualifications for the service he is expected to perform. Even in such cases, there should be due consideration given as to whether there is a commissioned officer of any component branch of the Army with suitable qualifications who is available for assignment."

These policies were maintained throughout the implementation of the direct appointment program. Under it, many patriotic citizens ineligible for the draft but possessing critical skills needed by the Army, interrupted their professions and made their services available to the Government.

There was still another important source of officer procurement during World War II. Reminiscent of the days of chivalry when a com-

mander conferred an accolade on the field of battle for an outstanding feat, battlefield commissions were tendered thousands of enlisted men who proved their leadership ability on the ultimate testing ground—actual combat.

BETWEEN December 1941 and August 1945, a grand total of one million and twenty thousand individuals served as officers in the various components of the Army of the United States. Of these, more than six hundred thousand were enlisted men who came up from the ranks to earn their commissions, mostly by graduation from Officer Candidate and Aviation Cadet Schools or as battlefield appointees.

Taken all together, officer procurement methods during World War II were eminently successful. In less than four years, the officer corps—with a Regular Army nucleus of 14,000—was increased by seventy times that many Reservists, National Guardsmen and appointees. The quality of selection and training of this tremendous increment was such as to enable it to lead the largest Army in the Nation's history to victory over formidable enemies despite the handicap of delayed military preparations.

These procurement programs, be it noted, did not blossom forth overnight. They were the product of many years of careful thought, planning, and hard work on the part of War Department general staff officers during lean peacetime years in which the Regular Army struggled unnoticed. Granted also was the gift of *time* for implementation of prepared plans—largely made possible by the determined efforts of America's allies.

FOLLOWING VE-DAY, and with victory over Japan in sight, Army personnel planners were faced with still another officer procurement problem—this time for the Regular Army. With the United States emerging from the war as one of the top powers in the world, it became increasingly apparent that the Nation would have to maintain a first-rate Army; that its size must be much greater than the traditional handful of men maintained for defense; that to lead it, many new officers—an augmentation numbering in the thousands—would be required.

Obviously, the war-trained pool of temporary officers would be the major source. These men had proved themselves under trying conditions; they had acquired experience and military know-how; they had served their Nation faithfully; and a grateful country desired to accord them proper recognition. Moreover, they were enthusiastic about becoming Regulars. Applications quickly climbed past the 100,000 mark.

But after VE-day there were still many problems blocking the formulation and implementation of a firm, long-range and balanced Regular officer augmentation program. How long would the war with Japan go on? How many officers would be needed to prosecute it? How would the post-war international situation shape up? In the coming post-war era, what armed strength would be required to maintain an adequate posture of defense? What forces, if any, would the Nation require to support the United Nations organization, soon to come into being? How many troops would be re-

quired to occupy the lands of the defeated Axis countries, and for how long?

At the time, these questions were unanswerable. Yet upon the answers depended the basis for planning the size of the Regular Army and the number of temporary officers to be awarded Regular commissions. Obviously, it would not do to wait. After World War I, a similar program had been delayed until 1920 and 1921 with unfortunate results. This was recognized generally, and pressure was being exerted both by the Army (as reflected in General Patton's letter) and by those desiring to become Regulars, that something be done *now*.

Accordingly, a decision was taken by the War Department to seek legislation immediately authorizing an increase well within the lowest estimates of minimum requirements, with the proviso that a further increase more in line with actual requirements was to be requested at a later date.

A Regular Officer Corps of twenty-five thousand was the interim figure decided upon. With the existing Regulars numbering somewhat less than fifteen thousand, this meant that ten thousand new officers could be appointed. Congress cooperated by quickly passing this legislation.

In addition to the augmentation figure, other major policy recommendations were simultaneously approved and incorporated into law. Aside from a few general officers, individuals were to be taken into the Regular Army only in grades up to and including major; this, in order to avoid further aggravating a World War I-imposed "hump" situation existing in the next higher grades. Further, those selected were to be *integrated* into the Regular promotion list, rather than simply added to the bottom of the list in each grade.

Taken together, these policies provided the planning group with a firm working basis. The group itself consisted of an *ad hoc* committee made up of representatives from G–1, G–3, Special Planning Division, Army Ground Forces, Army Service Forces, and Army Air Force.

TWO prime considerations confronted the committee—What selection methods and administrative procedures would be used? In which Regular grade would individual officers be appointed?

With reference to grade in which appointed, four major criteria, among others, were given heavy consideration. These were: (1) Highest temporary grade held by the applicant; (2) Efficiency, as indicated by the individual's efficiency reports; (3) Length of active Federal service; and (4) Age.

Arguments in favor of utilizing the highest temporary grade held, included statements to the effect that wartime promotion constituted *prima facie* evidence of demonstrated ability, and the fact that promotions of this type were earned rather than reached by the automatic operation of a system of seniority and attrition. Opponents pointed out that although the wartime system of promotions had worked well on the whole, it had been far from perfect, and there had been, of necessity, many differences and variants in its applica-

tion. Much had depended on position vacancies; there were differences in the arms and services, within theaters and among theaters and the Zone of the Interior; between types of organization, some expanding rapidly, others contracting. Examples cited showed that some men with consistent superior ratings were promoted long after others who had been rated only excellent.

Many on the committee were avid proponents of using efficiency as the grade determinant, particularly among the ground arms. The Army's efficiency rating system had been built up over a long period of years, and provided an insight as to a man's worth to the service. In the end, however, it was decided that efficiency should represent one of the important yardsticks to determine whether a man should be accepted in the first place, but not the grade in which he should be appointed.

Length of service as a criterion was considered from a number of angles. Its traditional use in determining relative rank among officers of the same grade was noted. It was argued also that length of service logically involved an accumulation of experience and professional knowledge. Mitigating this was the fact that most temporary officers had about the same length of service, give or take a few months. Moreover, it was pointed out that few Reservists could compete on the various promotion lists with Regulars who almost invariably had far longer service, thus precluding a true integration in the promotion lists.

In the end, *age* was the criterion adopted. Its proponents argued that men appointed to any grade should in general be with their contemporaries. The committee was reminded of the "hump" caused by World War I augmentation. In that instance, there had been too many captains of approximately the same relative rank on the promotion list. By the early thirties they were becoming greyheaded, and lieutenants were well into middle-age—with no promotion in sight. This situation had created a serious morale problem in the officer corps, and formed the basis for many letters to Service journals and much discussion among the members of Congress. The fact was clearly evident—that upon the prospects and opportunities for advancement depended the caliber of personnel which could be procured to maintain a vigorous, capable officer corps.

By using age as the primary criterion, it was hoped that a repetition of this unhealthy situation would be avoided. It was pointed out that an even flow of promotions depends mainly on attrition—and an important factor in orderly attrition is age, retirement age. (In practice, however, another hump, less marked than the earlier one, did materialize.)

Once this decision had been made, certain statistical data were required to support further planning. It was determined that the average age of appointment in the Regular Army was, for the combat arms, twenty-four and a fraction, and, for the technical and administrative services, twenty-six. A decision was made to consider twenty-five as the basic age of original appointment for purposes of the program.

Standards for promotion to first lieutenant in the Regular Army were fixed by law at three years' service; seven more to captain, then a total of seventeen to major and twenty-three to lieutenant colonel. Promotions to colonel were made according to seniority whenever vacancies occurred.

A system of constructive service credit based on the above standard was worked out so that applicants within the age group of Regular lieutenants would be tendered Regular commissions in that grade, and so on up the line. For example, if, taken as a group, individuals holding permanent commissions as captains were thirty-five and had ten years' service, then temporary officers meeting the standards for Regular commissions who were thirty-five, or between thirty-five and the next age bracket (forty-two), would be integrated as captains to rank within that grade with their age contemporaries.

ARMED with these decisions, the committee planners evolved a specific program of selection which embodied the tried and proven aspects of past Regular Army personnel procurement procedures in combination with the latest scientific personnel management methods. The system was field tested for validity and was found to be accurate.

As finally evolved, the system consisted of six simple steps. Any temporary officer desiring Regular appointment would first submit an application for commission in the Regular Army. The next step was the administration of the General Survey Test (GST), a screening device to eliminate those who did not possess sufficient general education, background, and inherent intellectual capacity to advance in the military profession. Next he was given a rigorous physical examination and either met the stringent requirements, or failed and was eliminated.

Officer Evaluation Reports (OER) constituted the next selection instrument. Superiors under whom the applicant had served were required to execute a form containing some eighty questions. When these had been answered and mechanically scored, the results pointed with amazing accuracy to the strengths and weaknesses of each applicant.

Another selection tool, the Biographical Information Blank (BIB), was executed by the applicant himself. The form consisted of many pages containing questions to be answered categorically as well as others requiring narrative treatment. To some extent it contained valuable information concerning the man's past history, his character, temperament, intellectual ability, and his possible future value to the service.

Final step in the selection process consisted of a personal appearance before a board of officers. Because of the many thousands of aspirants, many boards had to be established both at home and abroad; however, great pains were taken to ensure that they would operate within an acceptable standard of uniformity. Unlike similar boards in the past—which were utilized largely to administer oral and written examinations—the main function now was to evaluate the individual as a person inasmuch as other devices were being utilized

to assess experience, professional competence, and potential value.

Results of the above selection processes were reported to Washington, where they were individually scored, and a composite score arrived at. The three major organizations—Army Ground Forces, Army Service Forces, and Army Air Forces—each were assigned a quota. After carefully reviewing each case, boards within these major commands drew up two lists—one consisting of applicants acceptable to it or one of the arms or services for which it was acting, the other listing those who were rejected. Other boards operating within the arms and services themselves were then given an opportunity to review each applicant's folder from among those requesting assignment to that branch who were on the acceptable list. The Secretary of War's Personnel Board, consisting of five general officers, was the final selection authority.

When the first augmentation was completed on 28 August 1946, more than 108,000 officers had applied, and roughly 10,000 had been selected for appointment to all grades through major.

BUT ALREADY another Act (Public Law 670–79th Congress) was on the statute books authorizing another increase—25,000—for by this time it was foreseen that at least 50,000 Regular officers would be required for our peacetime forces. (This figure included Air Force Regulars, then integral to the Army. Following the postwar separation of Army and Air Force, legislation fixing the strength levels of these services left the Army with a total of 30,600 officers—its current authorized strength level.)

The second post-war augmentation took place in 1947. In general it adhered to the same policies and procedures utilized in the first integration, though there were variations of a minor nature. A block of seventeen thousand additional officers received Regular appointments immediately, leaving some 8,090 vacancies to be filled during a planned second phase which was to cover a period of years.

IT WAS in connection with the authorization for this new increase that a clear statement of the Army's philosophy of personnel procurement—reflecting the traditional American doctrine of equal opportunity for all—was formulated. Testifying in behalf of the new increase before Congress, General Eisenhower, then Army Chief of Staff, stated:

". . . We feel that if we keep this broad base, to bring into the Army, you might say, the educational results of great institutions all over the country, and hold to the enlisted men the chance that they can become officers, with reasonable application and with a reasonable endowment of talents, we have raised the whole tone of our Army all the way through. If we have this corps of 50,000 Regular officers, let us assume that on our three and one-half percent attrition basis you have to take in about 2,000 men a year to vitalize it. The average output of West Point on its present authorization will be about 550. We will have every year almost 1,500 men coming in from these other sources. In other words, through the appointment of you gentlemen and through the President's quotas, and so on, 1,500 will have to come directly from these other sources. And I think that is a proportion that is about right; because the West Pointer will continue to bring the standards of discipline and conduct that we expect from him and expect that school to establish, and the others will absorb it

and bring to the Army this broader base of education and possibly even different philosophies, we might say. . ."

This philosophy of officer procurement has largely been incorporated in AR 601–100—the authority for current Regular officer appointment. These regulations list the seven major sources from which officers are now obtained and spell out in detail eligibility criteria and selection procedures. The seven categories are:

1) Graduates of the United States Military Academy.

2) Distinguished military graduates, senior division, Reserve Officers Training Corps.

3) Distinguished graduates of Army officer candidate courses.

4) Officers on active duty.

5) Technical specialists.

6) Enlisted men and women and warrant officers.

7) Graduates of Women's Army Corps officer basic course.

In addition, the following regulations govern the procurement of Regular officers for the branches indicated:

1) Judge Advocate General's Corps—AR 601–125.

2) Army Medical Service—AR 601–124.

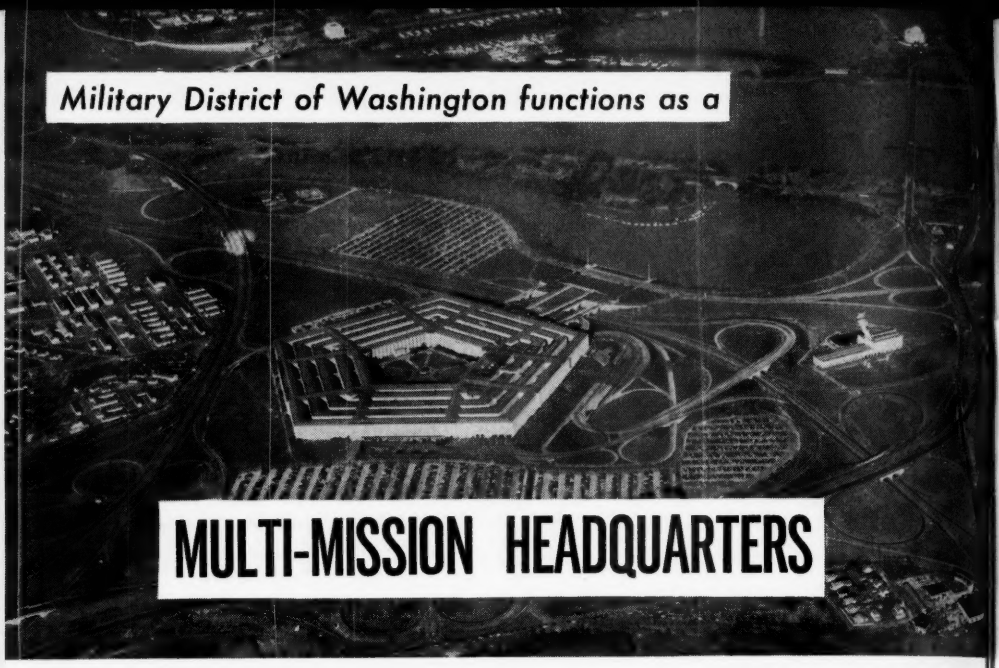
3) Chaplains—AR 601–126.

IN THE period which followed the post-war augmentations to the present, Regular officer procurement activity (other than that provided for in the above Regulations) has consisted of relatively small programs of competitive tours wherein officers were appointed on a competitive basis following a year of active duty training under close scrutiny and careful evaluation. Also, a small number of former officers have been tendered direct appointment under legislation now expired.

In reviewing the overall World War II period, two major developments of great impact stand out. First, there was the formalizing of a democratic trend of officer selection, extending opportunity to all those qualified on the basis of talent and application. This has created a broad base for officer selection and has brought into the Regular Army a cross-section of the Nation's citizenry.

Second major development was the success of the post-war augmentation programs which tripled the size of the Regular officer corps. Throughout, every effort was made to ensure that the program was carried out with absolute impartiality; that no applicant's chances were prejudiced by administrative error; that each decision was reached at every level within the framework of carefully drawn and uniform regulations; and that close supervision was exercised by carefully chosen and high ranking general officers. In the final analysis, the fortune of every applicant had rested with himself. He himself was responsible for his standing on the list. He personally furnished the information upon which three of the four selection instruments were scored (GST, BIB, and Interview); and the score on his Overall Efficiency Rating was the direct result of qualities he himself had demonstrated to his superiors.

Great forward strides had been made in officer procurement methods. Emphasizing this fact, and underscoring the excellence of the selection process, is the record of achievement of these officer appointees in the ensuing years.



Military District of Washington functions as a

MULTI-MISSION HEADQUARTERS

Colonel George R. Creel

WASHINGTON, D. C. has the unique distinction of being one of the very few cities in the world established solely for the purpose of serving as a nation's capital.

And its protective force, the Military District of Washington, is unique among Army organizations in that it was created expressly to meet the extraordinary military needs which exist in and about our national seat of government.

Situated virtually in the shadow of the Pentagon, almost within hailing distance of the White House, and under close scrutiny of Congress, the Military District of Washington operates always in the white heat of official attention. Yet some of its functions and activities have remained obscure to the public—and indeed to many members of the Army itself.

COLONEL GEORGE R. CREEL, General Staff, is Chief of Information, Military District of Washington.

DESPITE a similarity of nomenclature, the Military District of Washington differs markedly from the organizations known as Military Districts which have been established in all the states and in the District of Columbia. The State Military Districts are charged with administration of Reserve, National Guard, Reserve Officers Training Corps and recruiting activities—matters with which the Military District of Washington is not directly concerned.

The Military District of Washington (MDW), commanded by Major General John G. Van Houten, was established 5 May 1942, primarily to meet two requirements—to provide a well-organized and responsible defense of the Capital in event of emergency, and to perform the numerous services re-

quired at the seat of government by the War Department. It succeeded several other organizations with similar, but more limited, missions and functions.

Geographically, it embraces five counties, including the City of Alexandria in Northern Virginia, five counties in Maryland, and the District of Columbia which includes the City of Washington.

Small though it is in area—750 square miles—MDW packs in many Army installations, activities and units of widely divergent character. Certain of its responsibilities are world-wide. It has court-martial jurisdiction over all Army attachés, and their staffs, which represent the United States Army in all the foreign capitals. In addition, it has direct control over the First Arctic Test Detachment stationed at Fort Churchill, Manitoba, Canada—the Canadian Army post which also provides our Armed Forces with a valuable arctic weather research and development center.

Nevertheless, its basic responsibilities largely parallel those of the Zl Armies. It controls the operation, training, administration and supply services of a variety of units, activities, and installations. It furnishes assistance in civil disasters and disturbances; formulates plans for internal defense in anticipation of foreign invasion, sabotage, air-raids, or riots; and cooperates closely with Civil Defense agencies in planning.

Its peculiar responsibilities, however, concern the services provided for the Department of Defense, in or near the Capital.

THROUGH the Army Headquarters Commandant, Lt. Colonel Paul O. Hoffman, MDW manages the "housekeeping" and provides for the internal security of the Pentagon, the world's largest office building. This immense establishment is twice as large as the Merchandise Mart in Chicago and has three times the floor space of New York's Empire State Building. Virtually a city in itself, the Pentagon houses a working force of 30,000 people. Just one of the problems is the traffic control and daily parking of nearly 10,000 motor vehicles.

Also through the Headquarters Commandant, MDW administers the Armed Forces Service Center in the Pentagon. This organization assists military and certain civilian personnel, locally, in matters of travel, baggage-control, dependent movement, housing, hotel reservations, passports and insurance. The Personnel Services Section of the Center is constantly called upon to handle a diversity of human relations problems.

Recently, for instance, a frantic service family phoned the travel section and tearfully announced the disappearance of a four-year-old child. Since the tot had vanished about the time a van, carrying their household goods, had driven away, the parents were convinced that the little one had crawled into a packing box and was moving with the furniture. The Service Center had the van flagged down and an investigation was underway when the parents happily phoned to announce that the child had been found—near home.

In another instance, a household van rumbled away and with it went a service family's pet kitten. In this case the pet *had* been nailed into a shipping box. A day or so later

As honors are rendered by the Honor Guard, the President of Italy places a wreath on the Tomb of the Unknown Soldier.

when the van driver heard a plaintive "meow," the kitten was rescued and returned to its owner.

Household pets such as cats and dogs are shipped with service families to oversea stations, with attendant fees paid by the owners. The Service Center, however, denied a dependent's request for shipment of a monkey; another's for shipment of several valuable chinchillas. And it regretfully said "no" to a patriotic organization which desired to send a live buffalo to Korea. The beast was to be presented to the 17th "Buffalo" Infantry Regiment, then hotly engaged in the Korean fighting.

Another Pentagon activity controlled through the Headquarters Commandant is the United States Army Motor Center which provides transportation on a 24-hour, 7-day-a-week basis for the Department of the Army and other Government agencies. It chauffeurs the Secretaries of Defense and Army, the Chiefs of Staff and other top-level officials.

THE immense increase in United States prestige following World II has made Washington, in a very real sense, the nerve center of the entire free world. As a result, visits of foreign rulers and other important personages have increased many fold. MDW is charged with arrangements for their reception at the National Airport and other points of entry. Such arrangements are complicated and require considerable coordination.

Typical was the visit of Queen Elizabeth of England, and entourage, in November 1951. Planning for this occasion began as early as 1 October. The completed plans comprised more than seventy-five pages of directives and charts.

Split-second timing and control is the essence of success in staging such rigidly formal events. The gun salutes, spaced at prescribed intervals, lose their effectiveness if fired too soon or too late. Security measures, control of non-participating traffic and spectators, and the unforeseen and unforeseeable happenings which frequently occur, multiply the difficulties.

The Third "Old Guard" Infantry Regiment—oldest in the Army—is the heart of these important cere-

Maj. Gen. John G. Van Houten inspects the First Arctic Test Detachment, Fort Churchill, Canada, an international responsibility of MDW.

monial occasions. It is the traditional Honor Guard of the President of the United States, and, in that capacity, it leads all inaugural parades. The Regiment is under direct control of the Military District of Washington. (See "The Army's 'Old Guard'," May 1956 DIGEST.)

Also under MDW control is the United States Army Band which represents the Army in all important ceremonies. One of the Nation's foremost musical organizations, it has entertained millions in the United States and overseas. Its open-air concerts in the Capitol's East Plaza and at the Watergate are popular musical treats. On radio, it is heard over American Broadcasting Network's "Songs for Freedom Throughout the World."

AMONG the installations in and about the Capital City served by MDW are Fort Myer, Va., and Fort Lesley J. McNair, D.C. Fort Myer is the home of many of the Nation's foremost military leaders and is garrisoned by the Third Infantry Regiment.

Fort McNair, situated at the confluence of the Anacostia and Potomac Rivers, is also garrisoned by elements of the Third. It is home of the National War College and the Industrial College of the Armed Forces, both of which prepare selected officers for highest echelons of command. MDW provides these institutions with housekeeping services.

Adjacent to Fort Myer lies Arlington National Cemetery, one of our national shrines. Heroes of all the Nation's wars, from the Revolution to the Korean conflict, are buried here. Also located here is the Tomb of the Unknown Soldier, perpetually guarded by carefully picked soldiers of the Third Infantry. Two other large military cemeteries, one at the Soldiers Home in Washington, and one in Alexandria, are also under MDW control.

Cameron Station, in Alexandria, is another of the District's important installations. It is charged with shipment of Government property and with packing, crating, and shipping of household effects belonging to Armed Forces personnel. Also at Cameron Station are a

Parking control at this Pentagon lot is just one of the problems handled by Army Headquarters Commandant of MDW.

number of small but important technical units.

ARMY enterprises which receive MDW support include the Capital's antiaircraft defense groups, the Army Map Service, the Army Command Management School and scores of specialized units of the Army and of other Armed Forces.

While MDW has no direct contact with the Presidential Mansion, it indirectly supports that establishment's motor pool and the White House Communications Center. During President Eisenhower's recent illness, the 509th Transportation Company (Light Helicopter) under direct MDW control but stationed at Fort Belvoir, Va., ferried the Nation's chief officials between Washington and the President's Gettysburg home.

A busy, important command, the Military District of Washington has a singularly diverse range of activities, yet its primary reason for being is to protect the Nation's Capital. That fact is symbolized by its red-bordered oval sleeve-insignia which centers a white Washington Monument, mounted on a green mound over a blue background, and crossed by a red two-handed sword.

THIS COPY OF ARMY INFORMATION DIGEST IS AIMED AT ALL MEMBERS OF YOUR ORGANIZATION

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●

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Best for the Finest

Colonel Charles S. D'Orsa

THE UNITED STATES infantryman must be prepared to meet his enemy with weapons and equipment second to none. To this end, military technicians and civilian industry have joined forces to assure that he is the best equipped soldier in the world today. In the process of developing and producing weapons and equipment, guidance must be provided the technician, and the suitability of end items for Army use must be determined. This, generally, is the mission of Continental Army Command Board No. 3 at Fort Benning, Georgia.

The Board, functioning as the link between user and developing agency, is actually the infantryman's representative in research and development. It consists of experienced, combat-trained officers and non-commissioned officers who are well qualified to present the user's point of view within the Board's assigned field of reponsibility. This field encompasses all infantry weapons, ammunition and its related accessories; combat clothing, equipment, and protective devices for the individual; small detachment and individual rations; field messing facilities; and animal equipment.

Specifically, the mission of Board No. 3 is to conduct service tests to determine the suitability of weapons and equipment for Army use and to recommend maintenance procedures, spare parts and tools for new items; to furnish guidance to developing agencies during development; to assist schools in the preparation of basic training literature and selection of training aids; to assist in the preparation of Military Characteristics; and to participate in troop tests.

To accomplish its development and test missions, the Board is divided into four test departments—Small Arms; Rocket and Recoilless; Mortar; and Field Equipment and Special Projects. Reports of tests emanating from these departments are checked by the Analysis and Control Department; and the results, with a complete analysis, are presented to the Directorate for final decision.

The Directorate, comprised of the various department heads within the Board, reviews all research and development matters requiring final decisions or recommendations prior to submission to higher headquarters. The Board President is also presiding officer of the Directorate.

COLONEL CHARLES S. D'ORSA, Infantry, is President, CONARC Board No. 3, Fort Benning, Georgia.

PRIOR to 1903, experimental infantry equipment was sent either to a selected regiment for test or turned over to special boards convened solely for that purpose. General Orders 45, dated 31 March 1903, established an Infantry Board at the General Service and Staff College at Fort Leavenworth, Kansas, consisting of three field officers of infantry and two senior captains at the College.

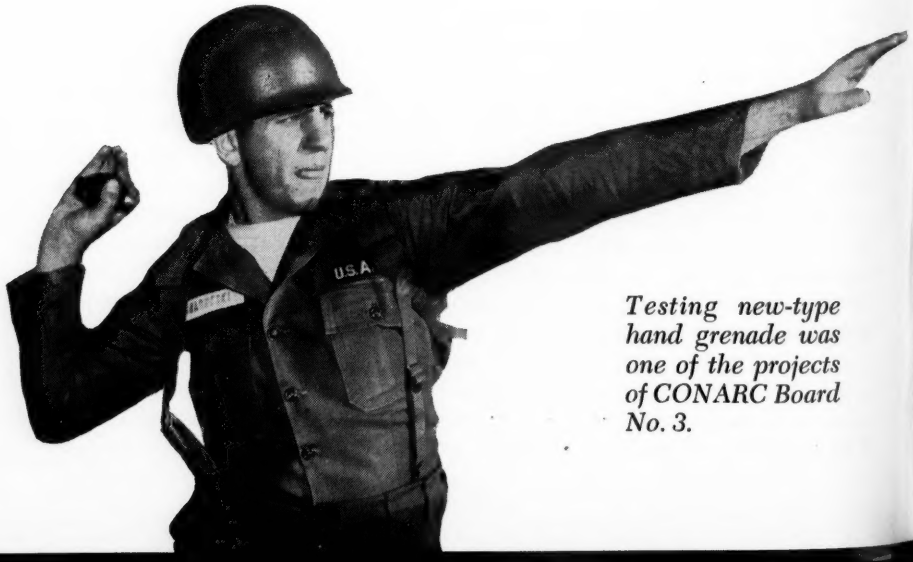
Upon the departure of the 13th Infantry from Fort Leavenworth for the Mexican border in March 1911, the Board ceased to function. Meanwhile the old School of Musketry at the Presidio of Monterey, frequently carried out tests on its own initiative.

In April 1919, the Lewis Board met in France to consider the lessons to be gained from World War I experience insofar as they affected the tactics and organization of infantry. In December of that year, the Infantry Board was established by War Department Order as a development and testing laboratory at Fort Benning, Georgia.

The sole function of this Board was to consider, with continuity of effort, the improvement of the infantry. This marked an important forward step in the establishment of a permanent agency to study the ever-changing problems and needs of the infantry.

In August 1931, The Tank Board, stationed at Fort George G. Meade, Maryland, was absorbed by the Infantry Board and remained a part of the Board until it was transferred to Fort Knox, Kentucky, in 1939. When the War Department was reorganized in 1942, the Infantry Board was redesignated Army Ground Forces Board No. 3 but its basic mission remained unchanged. In the ensuing years the name of the Board was changed several times but not its mission. Finally, on 1 February 1955, the Board was redesignated CONARC Board No. 3, operating under the direct supervision of the Commanding General, Continental Army Command, Fort Monroe, Virginia.

SINCE Board No. 3 is primarily



Testing new-type hand grenade was one of the projects of CONARC Board No. 3.

concerned with the weapons and equipment carried by the individual on the battlefield, weight saving factors are given much consideration. Studies relating to this problem have resulted in the doctrine that 45 pounds is the maximum desirable combat load to be carried by the foot soldier.

This 45-pound combat load includes two components—a 20-pound existence load for the individual's maintenance, and a 25-pound battle load which is his contribution to the fighting effort. This 45-pound combat load, of course, excludes the individual's clothing.

Cold weather conditions will always add to the burden, since more clothing and equipment are required for survival. In the case of a rifleman, the battle load is within the established 25-pound limit. The existence load of a weapons crewman, however, varies from 23 to 27 pounds, depending on whether he carries a pistol or carbine. Added to this, his battle load may vary from 25 to 45 pounds, depending on the weapon component carried. This could result in a maximum combat load of 72 pounds for an infantryman carrying a 57-mm. recoilless rifle. When clothing and equipment required for survival in cold weather extremes are superimposed, then obviously the individual soldier is overburdened.

The question naturally arises—What is being done? Actually a twofold effort is being made to enhance the battlefield mobility of the infantryman—by reducing the weight of the combat load, and by improving the means of carrying this load. (See "Lightening the Soldier's Load," November 1955 DIGEST.)

Utilization of mechanical carriers which can accompany the soldier in battle, and airlift to deliver this load where and when needed, are both receiving serious study and consideration. Board No. 3 conducts testing in this field.

CONSIDER for a moment the number of individual and crew-served weapons in the infantry today, along with their ammunition and fire control instruments. Add to this the countless items of equipment and clothing from helmet to combat boot necessary to maintain the individual soldier in the field. Only then can one begin to appreciate the tremendous task involved in assuring that every one of these items is unmatched in performance before it is delivered to the infantryman. Whether it be a new cartridge for the rifle or a developmental mortar, tests are conducted by Board No. 3 simulating every conceivable battlefield condition to assure effectiveness in battle.

Take for example a routine test for a developmental recoilless rifle and its ammunition. Before the weapon is accepted and recommended for adoption as standard type, it is tested to determine the accuracy and flight characteristics of the projectile; the probability of a first-round hit; the destructive effect against armor plate as well as concrete, log, and sandbag emplacements. Any adverse effect due to rain, dust, heat or cold, is ascertained. The effect of flash and blast is noted. Maximum and minimum ranges are established.

Tests are conducted to determine ruggedness and durability factors; the time required to go in and out of action; rate of fire and ease of loading. Battlefield mobility and

Combat conditions were simulated for test firing of the improved 3.5-inch rocket launcher.

tactical flexibility of the weapon are also tested. Innumerable tests are designed to determine a definite fact or answer specific questions.

A VISITOR to the various test areas at Fort Benning, Georgia, might observe a developmental machine gun firing in a simulated torrential rain. In another area, test firing may be underway to determine the accuracy of an improved mortar round after exposure to extreme cold.

Looking skyward, the visitor will perhaps see several boxes of high explosive ammunition falling to earth, attached to the shrouds of a malfunctioning parachute. Always a single question is paramount—How suitable is the item for battle?

The test officer will soon know the answers complete with supporting photographs and data in minute detail. When the final report is prepared there should be no unanswered questions. Is it safe, accurate, durable? Will it withstand the rigors of the Arctic winter? What will be the effect of the burning desert sun or jungle humidity?

The Board will also know the answer to still other questions—whether the new bayonet influences the accuracy of the rifle; if excessive muzzle flash of the new mortar would reveal its position; if the proposed lightweight flame-thrower has sufficient range. Hundreds of unknowns become known before the final decision is made—to accept or reject.

DEVELOPMENT of the medium mortar illustrates how Board No. 3 fits into the Army's overall Research and Development Program.

At the conclusion of World War II there was no doubt in anyone's mind that the medium mortar was a highly effective weapon. There were, however, certain deficiencies. First, the item was much too heavy. Although man-portable, its individual components were too heavy for prolonged man-handling.

The first problem, then, was to reduce the overall weight of the mortar. Second, in order to achieve the desired range, a small lightweight projectile had been used, with consequent diminished on-target effectiveness. Third, there was the problem of crew safety. An improved fuze had to be developed with positive delayed arming.

In substance, what was sought was a new mortar with substantially

Flotation capabilities of the new lightweight medium mortar were tested by firing it in soft sand.

decreased weight, but with significantly increased effectiveness.

American ingenuity and technical skill joined forces and went to work. In conjunction with The Infantry School, Board No. 3 drew up a set of desired Military Characteristics. With these as a guide, the developer—in this instance Ordnance Corps—started working in earnest.

Various lightweight alloys were tested, rejected, retested, until Ordnance finally found a lightweight metal that was capable of doing the job. Next, design specialists sought to eliminate all non-essential parts and simplify those remaining. The shape and design of the shell was changed. More powerful explosive fillers were utilized, and a fuze was designed for maximum safety.

From the drawing board to wooden mock-ups to prototypes, item after item was developed, tested, rejected, redesigned, retested. But piece by piece, the puzzle was assembled.

Before delivering the mortars to Board No. 3 for service test, Ordnance Corps conducted engineering tests under controlled conditions to establish whether or not the prototypes were technically sound and met all desired specifications. Now the real work of Board No. 3 began —to determine if the new mortar was really ready to be issued to the infantryman.

Months of painstaking and exacting user type tests have already been conducted. More will follow, but already this mortar is in the final stages of testing.

The new medium mortar will weigh appreciably less and will fire a shell of greatly increased lethality to longer ranges than the World War II medium mortar. Equally important, the mortar crew will be safe from premature shell detonation, heretofore the dread of all mortarmen. Thus another research and development project is approaching its objective.

NEVER BEFORE in history has research and development played such an important role in national defense—and rightly so. Today the United States infantryman must be prepared to fight on a moment's notice with weapons and equipment second to none. To this proposition Continental Army Command Board No. 3 is dedicated in keeping with its motto, "Only the Best for the Finest."

Army athletes are strongly represented in Olympic try-outs, as indicated in a

MID-OLYMPIC YEAR REPORT

Master Sergeant Robert L. Groover

AS THE dead of winter sets in at Melbourne, Australia, site of the 1956 Summer Olympic Games next November, an exciting summer season for amateur sports enthusiasts is now underway in America. And at the height of our fall football season next November, the "land down under" will be basking in the first warm days of Spring—days that will see the XVI Olympiad bring the world's best amateur athletes together for international competition.

With results of the VII Winter Olympic Games now on record, the world is looking forward to seeing which nation will produce the best amateur athletes in eighteen events ranging from fencing to canoeing, and from yachting to wrestling. United States athletes will come from all walks of the American way of life—including the U.S. Army.

Six Army athletes have already won berths on five U. S. Olympic teams, with thirteen Olympic trials still to be held. Final Olympic trial in the United States will be the cycling event in late October.

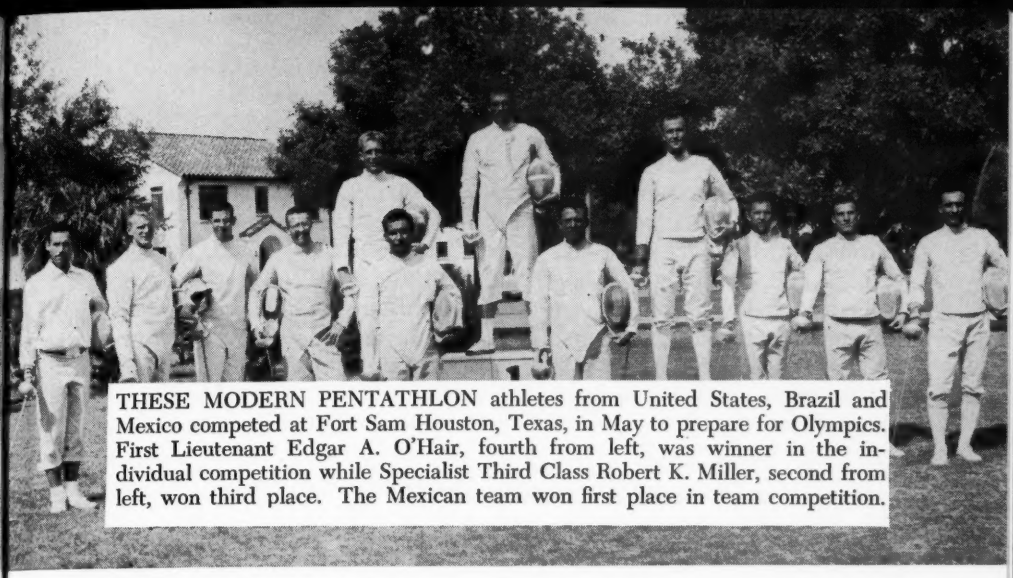
FIRST event of the Olympic trial season was the equestrian event at Tryon, North Carolina, last March. Major Jonathan R. Burton was selected as a member of the Olympic Three Day Equestrian Team and was granted permission to participate in Olympic equestrian events in mid-June and the International Competition a few days later at Stockholm, Sweden.

Three members of the Army won berths on the U. S. Olympic Soccer Team at trials held in March at St. Louis, Missouri. The three, Sergeant First Class Albert Zerhusen, Private First Class Siegbert Wirt, and Specialist Third Class William Conterio, all will have returned to civilian life. But as Reservists, they will represent the Army during the Melbourne events.

No Army basketball players gained berths on the U. S. Olympic Basketball Team. Athletes in this sport advanced through echelons of competition in regular Army sports programs to All-Army Championships. Some of them placed on the U. S. Armed Forces Team which competed with other American teams in Olympic basketball trials at Kansas City, Missouri, in April. The Armed Forces quintet started fast but was not able to hold onto its margins.

Five Army athletes participated in the U. S. Olympic Gymnastic trials and the National AAU Gym-

MASTER SERGEANT ROBERT L. GROOVER is assigned to Public Information Division, Office of the Chief of Information and Education, Department of the Army.



THESE MODERN PENTATHLON athletes from United States, Brazil and Mexico competed at Fort Sam Houston, Texas, in May to prepare for Olympics. First Lieutenant Edgar A. O'Hair, fourth from left, was winner in the individual competition while Specialist Third Class Robert K. Miller, second from left, won third place. The Mexican team won first place in team competition.

nastic Meet at Penn State University on 27 April. Competing in the all-round event for a position on the Olympic team were First Lieutenant Gilbert J. Brinkmeyer, Specialist Third Class Thomas Gardner, Private First Class Manuel A. Procopio, and Private Carmine Regna. Private Procopio was selected as an alternate for the Olympic team and will continue training at West Point under Gymnastic Coach Tom Maloney.

Again in late April the Army sent a sixteen-man wrestling team to Olympic wrestling trials at Los Angeles, California. The team was selected from thirty-nine applicants approved for training at Fort Dix.

One member of the team, Private First Class John R. Wilson, emerged Greco-Roman champion in the 114-pound class and won a first alternate position in the free-style event. Private Ralph Bartleman, who entered the trials on an unattached basis from Fort Carson, Colorado, won the heavy-weight Greco-Roman event and placed as a second alternate in heavy-weight free-style.

Wrestling in nation-wide competition with the other services, colleges, and athletic clubs, five other members of the All-Army Wrestling Team won alternate positions on the U. S. Olympic Wrestling Team in both the free-style and Greco-Roman events.

AN indication of how the United States will probably make out in the Olympic Modern Pentathlon event next November was seen when U. S. athletes met athletes of Brazil and Mexico in an International Modern Pentathlon in mid-May. On the first day of the five-day event, the U. S. team was forced by pentathlon rules to drop out of the team competition when First Lieutenant Harlan F. Johnson suffered a shoulder separation in the 2,500-meter cross country horseback riding event and could not continue. The U. S. athletes, however, went on to win individual competition honors.

First Lieutenant Edgar A. O'Hair overtook First Lieutenant Perez Mier of Mexico in the final event to win the individual championship. Specialist Third Class Robert K. Miller was the third high individual scorer in the meet.

OLYMPIC Modern Pentathlon

trials to determine a United States team at the Olympic Games will be held at Fort Sam Houston, Texas, in mid-October. A time table and training competition schedule has been set up for Modern Pentathlon members.

An All-Army Triathlon (all of the Modern Pentathlon events except riding and fencing) was staged at Fort MacArthur, California, 4 June, followed by an Interservice Triathlon later that month at the same post. A competitive try-out among the Modern Pentathlon athletes takes place in late July at Fort Sam Houston, Texas. Then comes the Invitational Training Competition in Sweden 18 August with the United States competing with Hungary, Switzerland, Sweden, and Finland.

The Modern Pentathlon squad will meet with Swiss and other European competitors in the Swiss National Championships 7 September for the last major Modern Pentathlon contest before the actual U. S. Olympic trials on 10 October at Fort Sam Houston, Texas.

WHILE applications for Olympic trials from Army athletes in the various contests have been good, the number could have been greater. Of course, contestants in track and field, swimming, shooting, and boxing will advance through echelons of competition in Army programs to All-Army Championships and would not necessarily have to make application for the trials. Winners of the championships will be selected for Olympic try-outs.

Regardless of the All-Army Championships, however, individual applications for trials in the mentioned sports will be carefully considered by the Department of the Army. Applications should be submitted as soon as possible to The Adjutant General, Department of the Army, Washington 25, D. C., Attention: AGMS. Pertinent regulations include 28–50, 30 November 1954 and DA Circular 28–19, 4 November 1955.

Approved Olympic candidates in some cases are now training at their assigned installations; special arrangements have been made for other athletes; and group training for other participants is either now in progress or will commence during the summer. Fencing candidates are training at Fort Jay, New York; water polo applicants at Los Alamitos, California (a joint service effort under Navy sponsorship); shooting candidates at Fort Benning, Georgia; and cycling aspirants at Parks Air Force Base, California. Rowing, yachting, canoeing, and weight lifting applicants in most cases train at their home posts.

Just how much enthusiasm members of the Army have for the Olympic Games can perhaps be gauged by the contributions all ranks have made to the Olympic Fund. As of March 1956 the eleven major Army commands forwarded more than $34,000 to the Treasurer of the U. S. Olympic Committee to help defray expenses of American athletes attending the Games.

While only time will tell exactly how many Army athletes will finally win berths on the U. S. Olympic Team, it is already apparent that the Army will be well-represented when international athletes face the 110,000 persons expected to crowd the Cricket Grounds at Melbourne, Australia, when the Olympic Games begin on 23 November 1956.

Magazine and Book Branch gives valuable assistance to the Army free lance, even to the point where

THEY'LL PEDDLE YOUR PAPERS

First Lieutenant Bruce Jacobs

IT FREQUENTLY comes as something of a shock to professional soldiers to learn that one of the "best-sellers" of all time was authored by an Army man—Brigadier General Henry Martyn Robert, Corps of Engineers. His *Robert's Rules of Order* became the standard work that is called upon to settle disputes wherever and whenever club parliamentarians cry out, "Point of order!"

Today, as in General Robert's day (he graduated from the United States Military Academy in 1857 and lived to enjoy his royalties to the ripe old age of 86) there are many in the Army who are well-qualified to engage in writing as a sideline activity. The Army writer of today, however, enjoys a distinct advantage—one that was scarcely dreamed of by soldiers of General Robert's generation.

Approximately 1,000 soldier-written manuscripts are handled by the Magazine and Book Branch, Public Information Division, Office of the Chief of Information and Education, Department of the Army, during the course of a year. And a surprisingly large number of these, authored by men who are not, strictly speaking, professional writers, find their way into print thanks to the small, hard-working staff assigned to this unique branch.

Every mail delivery brings a new batch of manuscripts or idea outlines. Every outgoing mail includes letters advising and encouraging Army men and women who want to write. Through the Branch, many soldiers have seen their work in print in the Nation's magazines and have enjoyed not only the thrill of a by-line but, frequently, the tangible satisfaction of a publisher's check.

To cite a "case history," here is how one Army man with a hankering to write actually cracked the ice.

A letter reached the Branch one day which said in part, "I hesitate to waste your time in this way, but an urge that has been building up for years came to a head this morning, and I wrote the enclosed tale—my first unlettered effort at self-expression through fiction—

FIRST LIEUTENANT BRUCE JACOBS, USAR, is author of "Heroes of the Army: The Medal of Honor and Its Winners, 1862–1953" *(W. W. Norton Co.) and of numerous magazine articles, including the current series of Army division histories in* SAGA.

which led to the problem of what to do with it. One suggestion was to send it to you."

In his hesitant approach to the Branch with a story of combat in Korea, Major Wood B. Heminway (not his real name, of course) asked many questions about writing articles or fiction, about clearance, about accepting money for his writing—in short, almost all the questions people in the field ask about the Branch's activities. Most of the answers are to be found in a summary of the Magazine and Book Branch missions.

BASICALLY it is the job of the Branch to tell the Army's story through the pages of books and magazines published in the United States. Among the nine short paragraphs outlining the Branch's responsibilities in the Table of Distribution which establishes and guides the Office, Chief of Information and Education, are the following:

"g. Reviews manuscripts prepared by Army personnel for publication in nationally-circulated, general interest magazines and books to insure conformity with Army policy and propriety. Coordinates review of same by appropriate agencies for security and accuracy.

"h. Attempts to place with editors and publishers manuscripts prepared by Army personnel on Army subjects after such writings have been reviewed and cleared for open publication."

Coupled with two other paragraphs, one each from AR 360–5 and AR 600–10, they guide approximately a thousand manuscripts each year into the Branch. These are the Branch's basic rules for dealing with authors in uniform.

AR 360–5 says: "Within the bounds of security and Department of the Army policy, the writing of articles, books, and related material intended for publication . . . by military personnel, on topics of military and professional interest, or general interest concerning the Army, or in support of the military policy of the United States, or in the interest of the national defense, is authorized and desirable"; and AR 600–10 specifies:

"The policy of the Department of Defense is that military personnel who desire to engage in public writing for personal profit are on an exact parity with civilian professional writers so far as accessibility to classified current technical or operational military information is concerned."

FURTHER guidance for military writers is furnished by the Secretary of Defense directive of 29 March 1955 which specifies that writers shall not offer manuscripts to publishers prior to clearance through official channels. For Army writers, this means Magazine and Book Branch.

The Defense directive, implemented by subsequent Department of the Army directives, also specifies that Army-written articles shall make a "constructive contribution to the primary mission of the Department of Defense." It further prohibits military and civilian personnel of the Defense Establishment from making any commitments to furnish manuscripts to outside publications without prior approval of such commitment, even though no manuscript has been prepared. An exception is made only in the case of specific requests from *Service* journals for articles.

These may be granted without prior approval, and such articles written on duty time, with the use of office facilities and stenographic help. However, the completed manuscript must still be reviewed and cleared for publication.

Fiction as well as non-fiction, it is emphasized, must be submitted for review and clearance when the author is a member of the Active Army, or is a retired Regular Army officer writing on a military subject.

WORKING with writers like Major Heminway, the Magazine and Book Branch assists Army authors in placing their material in appropriate magazines—a service that is helping more and more soldier-authors get their writings into print. Last year, for example, the Branch placed more than 160 Army-written manuscripts. The successful Army authors included general officers and privates.

A manuscript submitted to the Branch is "logged in" and given a first reading by one of the staff officers to determine which interested Army agencies should share the review process. After staffing within the Army, the manuscript goes to the Office of Security Review, Department of Defense, for security review and the official stamp authorizing publication.

The next step after its return to Magazine and Book Branch is to send it to the author or, if placement is requested, to give it a more thorough reading to decide where to "try" it first. In Major Heminway's case, the story was offered to two magazines which praised—but didn't buy—it. On the third try—the jackpot!

"The editor has just returned from vacation," wrote a staff member of *American Legion Magazine*, "and authorizes $500 for Major Heminway's piece."

His first literary effort, offered hesitantly, paid off.

THE FILES of the Branch tell many an exciting story of how an idea was translated to an actual story—and how the story came to appear in print. Here are a few examples:

A Regular Army Master Sergeant who married overseas and returned to the United States with his Japanese bride wrote a heart-warming account of the acceptance and friendship shown his wife and of their complete integration into the community. The article was eventually placed in *American Mercury*, and the author received a check for $75.

Another article written by a Specialist Third Class stationed in Germany, concerned a religious retreat conducted by Army chaplains at Berchtesgaden, the German mountain resort and site of Hitler's onetime hideaway. Offered to *Redbook* and *Cosmopolitan* unsuccessfully, it was ultimately placed in the *Christian Advocate* to earn the author $35. The same writer sold another piece on the Signal Corps' artificial earthquakes to *Popular Mechanics* for $150—also through the Branch.

None of the aforementioned articles have strictly military application, but all grew out of the author's military life and activities in the Army.

A colonel of Infantry, on the other hand, sent the Branch a thoughtful manuscript dealing with the impersonal influence of the

"mass" of the Army on the individuals who go to make up that Army. This professional discussion was cleared, offered to *Army Combat Forces Journal* (since renamed *Army*) and snapped up by that magazine—all in a matter of about three weeks.

Other articles, written by a retired lieutenant colonel, made the Big Time. The *Saturday Evening Post* accepted two of them: an article on Special Forces published in a May issue this year, and another on service of Lodge Act aliens in the U. S. Army.

Upon the return of American prisoners of war from North Korean prison camps, and the decision of twenty-one "turncoats" to remain with their Communist captors, the Nation underwent a soul-searching to determine what course of conduct should be established for freedom-loving Americans. Army writers, too, put their thoughts and feelings on paper and forwarded them to the Branch for clearance and marketing.

An officer in the Judge Advocate General's Office worked far into the night on a scholarly article outlining his reaction to the problem. Once cleared, it found ready acceptance in *Combat Forces Journal* (now *Army*).

Another officer in Europe wrote an article detailing the indoctrination methods of the Chinese and North Korean captors and the so-called "brainwashing" of prisoners. His article, a factual review of the record, found a ready buyer in *American Mercury*, which paid him $100 for the piece.

WHILE these are but a few of the manuscripts placed by the Branch during the year, they indicate several points of interest to the military writer. First, they show that the Army writer can be successful, and his work can appear in national publications. Second, that the Department of the Army actively encourages and helps the man in uniform who wants to write. They also hold some lessons about the kind of material best suited to produce commercially successful manuscripts.

All the foregoing are articles written about something the writer knows well and in which he has a personal interest. The master sergeant wrote about himself and his wife, and about the essential kindness of man. The specialist in Germany wrote about a religious experience he himself had undergone, while his article about artificial earthquakes was based on an interesting, off-beat experience gained in Army service. The others, both active and retired, wrote as professional soldiers, about subjects they know well and had a personal interest in. They wrote on subjects which intrigued them, which would pique the reader's curiosity, and which were easily researched through military channels. Thus we see that solid knowledge of a subject is vital for successful writing.

NOT ALL Army writers are so successful, of course. The Branch tries to place manuscripts in the best magazines possible, but Army writers must realize that, in writing, they are competing with full-time professionals. Much military writing is about military subjects, combat lessons, discussions of tactics, and similar material which are of interest primarily to the pro-

fessional soldier. The Branch places many such articles in magazines of military content such as *Army, Military Review, Army Information Digest,* and various technical Service journals.

Quite frequently Army-written manuscripts reach the Branch accompanied by a hopeful "for placement in *Saturday Evening Post* or *Reader's Digest*" note. Whenever possible, the author's preference is respected. Often a piece which cannot be sold to one of the major markets is happily accepted by one of the somewhat smaller magazines. And even if his work fails of finding a publisher, the Army writer can ask for, and get, advice from the Branch which may either improve the article to the point where it will be acceptable, or provide the background for new and better writing.

Sometimes, of course, a piece cannot be salvaged. In that case the Branch must send it back to the author with a simple letter of regret; but even this does not discourage many Army writers. In letter after letter they express their appreciation for the personal treatment they get from the Branch and the helpful suggestions offered.

THE BRANCH is somewhat of an anachronism in today's Army of more than a million men and women, where most letters have numbered paragraphs and mail wends its way through channels in orderly fashion. Most Public Information Officers in the field are authorized direct communication with the Office of the Chief of Information and Education. This same authorization has by usage been extended to cover all those who want to write for magazine or book publication. The Branch is as close to any soldier as his mail box.

Answers come back to him the same way. Dozens of letters a month go forth from the Branch to individuals in Army installations from Asmara to Camp Zama, advising them, making suggestions on their articles, or simply answering their questions. If this policy of individual interest was ever questioned, it was vindicated once and for all when a lieutenant colonel just back from Korea walked into the office to commend the Branch on this one aspect of its work. "It's one of the greatest morale factors I've ever seen," he said, "and it certainly makes people want to write. Even when all they've had from you is a rejection, they go out and scrounge for another story idea, because the rejection was personal, *to them,* from the remote majesty of the Pentagon."

Branch staff members always prefer to see a writer's efforts crowned with a remunerative check. But sometimes when the possibilities for a cash sale are exhausted, it is still possible to have the manuscript placed in a magazine which offers not payment but prestige and the opportunity to enhance one's professional military standing. *Armor,* for example, does not pay for manuscripts; *Military Review* pays only for the two articles in each issue which the editors consider the best.

THE ARMY writer can help his cause, and hasten the handling and placing of his material, by being explicit in his requests for aid. He should make it abundantly clear

whether he is looking for a *sale*, a *placement* (if no sale can be made); or he may simply ask the Branch to process his manuscript through Security Review and to return it to him for marketing.

Army writers are not the only "clients" of the Branch. Its officers also work closely with magazine editors, staff writers, and free-lance writers. Many stories on Army topics in the country's leading magazines originate here.

Primary reason for existence of the Branch is to see that the Army story is told through books and magazines. Toward this end all avenues of approach are used. And for this reason the Branch strongly urges the continued interest of Army writers; for who can tell the Army story better than the man who wears the uniform?

Another important consideration, too, is that professional soldiers can best foster professional military discussion. The Service journals particularly thrive upon such discussion—and in this area the spark must be generated by military men.

THERE ARE not nearly enough Army writers. In 1953, when the Army strength stood at about one and a half million, the Branch received slightly fewer than 1,000 Army-written manuscripts. Even this figure does not mean that there were 1,000 Army writers. Many were features written and submitted by Public Information Officers as special releases. Others were second, third or fourth manuscripts from the same small group of prolific writers whose efforts the Branch staff welcomes and expects to see periodically.

One of the reasons for the paucity of Army writing, Branch members feel, is that many potential writers do not write because they simply do not know what to do with the finished product.

It is here that the services of the Branch can be of direct help. Sit down and write, and when you have finished the job send it to the Magazine and Book Branch, Public Information Division, Office of the Chief of Information and Education, Department of the Army, Washington 25, D. C.

FOLLOWING are a few simple rules that will make things easier both for the Branch and for yourself:

- Manuscripts should be neatly typed, double-spaced, on one side only of letter-size white paper.
- Title and by-line should be centered from one-third to one-half way down first page. Full name and address should be typed in upper right hand corner of first page *only*. Following pages should have normal margins of an inch or an inch-and-a-half all around. Pages should be numbered.
- Manuscript should be mailed to the Branch *FLAT* with cardboards or other backing to keep it from being crumpled. Pages may be held together with paper clip but should not be stapled.
- If you are asking the Branch to attempt to market the article for you, be sure to send the original copy. Remember—and this is the basis of the first three rules—selling an article is like selling anything else; an attractive package helps in sales appeal.
- Don't handicap the manuscript with an official letterhead or a "For Immediate Release" dateline. Editors like a clean uncluttered page to contemplate. Also, *this isn't a hand-out or news story.*
- If the manuscript deals with atomic energy, international affairs, or foreign policy, send the Branch three copies. Otherwise, one copy will do.

- In your cover letter specify exactly what you would like the Branch to do for you. If you simply wish the manuscript cleared for publication so you can offer it to editors yourself, ask that it be cleared and returned to you. If you wish the Branch to attempt to place it for you, or to offer critical advice, or both, say so.

These rules are basically for men or women in the uniform who are writing in their spare time for the pleasure, profit or prestige of seeing their material in print.

IN ADDITION, the Branch offers tailored services to Public Information Officers, many of whom do not appear to be taking full advantage of their magazine opportunities. Given a complete set of facts by the PIO, the Branch can suggest a story possibility to editors who may want to have an article written to satisfy the needs of their particular magazine.

A man with an idea—whether PIO or free-lance—can frequently get good magazine play for a story if he can give the Branch an outline of a potential article. The magazine outline is not the paragraph 1, sub–A, sub–B sort of outline, but instead is a narrative summary of a possible story. It should contain the basic essentials, a few anecdotes to illustrate both the story and the fact that humanizing material is available, and a footnote concerning the availability of further anecdote and pictures.

The Branch has had considerable success in working from such outlines. In fact, the Branch itself does not write magazine articles. All of the story ideas originated by the Branch are offered to editors or writers in this outline form. Normally, the Branch makes contact with magazines, but if a writer knows an editor, or has an agent, he may make his own deal, once the story has been cleared.

If the military writer or PIO has an idea that something is going on in his area that would make a magazine article, but does not have the time or inclination to prepare an outline, he can query the Branch in a short letter. If the Branch officers can see a story in the idea, they will write the author, specifying the kind of information needed.

Leads of this sort are welcomed. Indeed, officers of the Branch are convinced that literally hundreds of Army stories go untold each year because writers and PIO's do not bring them to the attention of the Branch.

Lieutenant Colonel James G. Chesnutt, Chief of the Magazine and Book Branch, tells every unit and installation PIO he meets to drop him a line whenever a solid story idea comes to mind.

"Our crystal ball," he says, "gets a little cloudy when we try to read in it what's going on in the way of magazine story possibilities at remote locations in the United States and overseas. We need your help in letting us know what is happening at your installation. Send in your ideas."

There is no magic formula for success in the book and magazine field. All that is required is an idea or insight and the will power to keep the seat of the trousers applied to the seat of the chair.

Once that story idea of yours has been crystallized into manuscript form, you will find that the rest of the process—clearance and placement—has been immeasurably eased by Magazine and Book Branch.

WHAT'S NEW

IN TRAINING LITERATURE, AIDS AND EXTENSION COURSES

Keep your organization current with the latest training materials by referring to this section in each issue.

TRAINING LITERATURE

While the following new literature will be published shortly, units are cautioned *NOT* to requisition copies until receipt of automatic initial distribution or the items are listed in DA Pamphlet 310–3.

Technical Training of Parachutists. This revision of TM 57–220, Sept 1952, covers familiarization with the troop parachute, techniques of parachuting from transport airplanes, training apparatus, attachment and wearing of individual equipment, safety regulations, and jumpmaster duties.

Construction Materials. A new ROTC Manual is being published in three volumes for use as the basic reference in Engineer MS III ROTC instruction. The first volume (ROTCM 145–5–1) covering "Construction Materials and Engineer Computation and Layout" has been approved for publication.

Military History. This revision of ROTCM 145–20, June 1954, provides additional textual material to support the 30 hours of instruction on this subject in ROTC training programs and corrects deficiencies in the existing edition. Besides tracing the origin and growth of the U.S. Army, this new edition outlines the principles of war and illustrates their application; it also deals with the attributes and contributions of American military leaders.

Ground Flame Field Expedients. This new training circular is designed as a guide in the assembly and employment of ground flame field expedients pending incorporation of pertinent portions in appropriate field manuals.

TRAINING AIDS

Training Films recently approved for distribution:

Technique of Machine Gun Fire. Initial distribution has been completed of Part III of this training film series. Entitled "Direct Laying," it covers firing technique for various types of targets including point, wide, deep, and oblique targets.

Defense Against Radio Jamming. The film teaches how to recognize radio jamming and how to minimize its effect.

Motor Vehicle Control. The following new films have recently been distributed:

TF 19–2271–"The Traffic Accident Spot Map"
TF 19–2272–"The Collision Diagram"
TF 19–2275–"Motor Vehicle Spot Speed Studies–Setting Up Mirror Boxes"

Camouflage in the Soviet Army. One of a series, this new film–MF 30–8439, "Armies of the World–The Soviet Army –Camouflage"–shows how the Soviet Army uses camouflage and concealment.

Soviet Army Higher Headquarters in Combat. A new film MF 30–8588, "Armies of the World–Soviet Army–Higher Headquarters in Combat" is an adaptation of a Soviet training film. It covers the Soviet Military High Command, tracing its development and capabilities in the late 1930's, in World War II, and during the postwar period.

ARMY EXTENSION COURSES

The following subcourses have been approved for publication by Headquarters Continental Army Command and are either new subcourses or major revisions:

G3 Functions and Techniques–II, Subcourse 9. Command and General Staff College. Techniques and specific means employed by a division G3 in the execution of his responsibilities and functions, including planning and execution of marches and troop movements under combat conditions, and preparing and conducting a command post exercise and field exercise for an infantry division. The purpose, scope, and methods of troop information and education in peace and in war are also covered.

G4 Functions and Techniques–I, Subcourse 10. Command and General Staff College. An introduction to logistics in the combat zone, including the organization and functioning of the logistical system in the combat zone: principles of supply, transportation, evacuation and hospitalization, and the organization, capabilities, and limitations of technical and administrative service units.

G4 Functions and Techniques–II, Subcourse 11. Command and General Staff College. Covers the principles, procedures, and techniques employed in logistical planning with emphasis on the infantry division in combat, the form and content of the logistical estimate, logistical plan and administrative plan; preparation and use of orders and reports.

Airborne Corps Operation, Subcourse 32. Command and General Staff College. Covers the problems of planning and executing an airborne assault by a corps of three airborne divisions to seize an airhead to facilitate the landing and passage of amphibious forces and future operations. Plans are made for the utilization and coordination of naval gunfire support, air support, and ground fire support to aid in the coordinated juncture of the airborne and amphibious forces. Command and staff functions and application of tactical principles are emphasized. A complete plan is developed for seizure of an advanced base by airborne corps.

Staff Duties of the Administrative Chaplain in Combat Organizations, Subcourse 32. The Chaplain School. Covers staff duties of administrative chaplains in combat divisions, corps, field armies and joint operations.

Drawings, Specifications, and Standards, Subcourse 30–13. Chemical Corps School. Specifications, standards and purchase descriptions and their relationship to Chemical Corps procurement; elementary drafting principles; reading of drawings and blueprints.

Tactical Wire Systems (Corps), Subcourse 30–6. Signal School. Planning and employment of tactical wire systems at corps level; capabilities and limitations of spiral-four cable; tactical open wire construction; tactical repeaters; tactical carrier systems; central office sets; construction problems and their solution; preferred methods of achieving maximum communication economy.

Communication Center (Corps), Subcourse 30–8. Signal School. Duties and responsibilities of personnel assigned to communication center activities; methods and procedures for installation, organization, and operation of communication centers at corps level; the application of communication center and message center procedures in tactical operations; proper utilization of available means of signal communication; messenger traffic planning; communication security.

Signal Corps Industrial Mobilization Planning, Subcourse 50–50. Signal School. Procedures and mechanics of industrial mobilization planning; problems in mobilizing industry for war production; industrial mobilization problems in World War II and measures adopted to solve them; planning program to be prescribed in the event of war.

Military Justice IX (The Law Officer–Instructions), Subcourse 41. The Judge Advocate General's School. An analysis of the Law Officer's duties in instructing the court-martial on issues of the case.

Military Comptrollership, Subcourse (50–6) 58. Finance School. Background and development of comptrollership; the Army's managerial system; the role of a comptroller; review and analysis; budgeting activities; accounting, internal auditing, and supervisory reviews; comptroller's management engineering responsibilities; qualifications for comptrollership.

Combat Command, Armored Marches, Subcourse (50–6), 112. The Armor School. The planning and preparation of armored marches for a combat command to include computation of time and space factors, conduct of the march, preparation and occupation of bivouac and assembly area.

The Army Statistical and Accounting System I, Subcourse 46. The Adjutant General's School. Development, structure and objectives of the Army Statistical and Accounting System; principles of punched card accounting; machine records unit organization.

M33 Track Radar Systems, Subcourse (30–61) 55. Ordnance School. Complete block diagram of track trigger generator, modulator, RF system, lobing generator, pre-amplifier, track range units, track indicators, automatic range tracking, automatic azimuth and elevation tracking, and power supplies.

PARAGRAPHS

from

The Pentagon and the Field

In the latest application of the single manager system to common use items for the Armed Forces, the Department of Defense has given the Secretary of the Army responsibility for military supply management functions pertaining to clothing and textiles used by the Army, Navy, Air Force and Marine Corps. The Secretary of the Navy will perform similar functions in the case of medical-dental supplies used by all the Armed Forces.

Redesignation of the Armored Center as the Armor Center, Fort Knox, Kentucky, is announced in General Orders 17. The Armored School also has been redesignated as the Armor School.

Section 514(c) Officer Personnel Act of 1947 provides for the forced retirement of certain Regular Army officers who have completed 30 "years' service" (including constructive service) when in the opinion of the Secretary there is an excessive number of officers on the active list of the Regular Army. This provision of law (also contained in paragraph 18, AR 635–130), is now being implemented, and the Secretary of the Army has convened a board of general officers for the purpose of considering certain permanent colonels for retirement. The first group affected by this proviso were retired 30 June 1956 and thereafter retirements of those selected by the Secretary will be effected at the end of the second month after completion of 30 "years' service."

An Army Logistics Management Center has been established at Fort Lee, Virginia. Expanding upon the Army Supply Management Course initiated at Fort Lee in October 1954, the new Center will offer four new management courses in Procurement, Requirements, Storage and Distribution, and Maintenance, with a basic orientation in the overall supply system.

The new courses will be phased in over a period of approximately one year. The first course, Procurement Management, is scheduled to begin in July 1956, and the last, Maintenance Management, in May 1957. All courses are of eight weeks' duration.

World-wide fiscal integration of Army and Air Force exchanges has been directed by the Secretaries of the Army and Air Force to accomplish increased operating efficiency, substantially uniform exchange services and prices, and equitable welfare benefits to servicemen within each service. The consolidation, including the introduction of a uniform accounting system, was ordered to begin with the present Fiscal Year.

Research psychologists of The Adjutant General's Office recently collected combat arms performance evaluations on 4,100 enlisted men of the 10th Infantry Division in Germany, as a follow-up to experimental tests administered to the same troops while they were stationed at Fort Riley, Kansas. The study is a part of a long-range effort to improve classification and assignment techniques for combat arms personnel. By studying test scores and performance evaluations, it may be possible to provide classification tests which will indicate more positively the probable success or lack of success of individuals in combat.

Key Army Signal Corps depots throughout the Nation and the Signal Supply Agency in Philadelphia have been linked together by an electronic data transmission system. By means of this network, information on stock levels of Army signal supplies is electronically interchanged between depots through "transceivers," using ordinary telephone circuits, that transmit and receive data on punched cards. The Signal Depots tied into the new system are located at Sacramento, California; Decatur, Illinois; Lexington, Kentucky, and Tobyhanna, Pennsylvania.

A contract has been awarded for the fabrication of 21,127 steel shipping containers for transporting military cargoes. The new style shipping containers, known as "transporters," have been used increasingly by the Army over the past three years to move supplies and equipment. The container—measuring 8-feet long, 6-feet wide and 7-feet tall—has made possible considerable savings in cargo handling and packing costs, while at the same time reducing losses from damage and pilferage. (See "Transport Without Wheels," November 1955 DIGEST.)

A new system of packing military clothing for shipment which minimizes wrinkling and soilage and reduces shipping container costs has been developed by the Quartermaster Food and Container Institute for the Armed Forces. Under the new system, each AG 44 coat, for example, is first folded over a paperboard pad. Five folded coats are then packaged in intermediate fiberboard boxes of standard dimensions for all coat sizes. Three such unit containers, holding a total of 15 coats, are packed into each shipping container. Use of the intermediate containers makes it possible to substitute lower-cost, lighter-weight fiberboard shipping cases for wood.

Public use of recreational opportunities at civil works projects of the Corps of Engineers reached an all-time high in calendar year 1955. Attendance during the year totalled 61,132,000, compared with previous records of 53,848,000 in 1954, and 41,301,000 in 1953.

Three new AR's—310–1, –2, and –3—consolidate Department of the Army publications policies and instructions which appeared in 29 separate directives (now rescinded). AR 310–1 covers basic policies and procedures for publications generally, including periodicals, forms management, and distribution of DA publications. AR 310–2 defines DA publications media and numbering systems. AR 310–3—given a limited distribution to DA publications preparing activities—covers preparation and processing procedures for new and revised DA publications and blank forms.

The Signal Corps Photographic Library and Laboratory, Washington, D. C.—a Class II activity under jurisdiction of the Chief Signal Officer—has been redesignated the Army Photographic Agency.

Official Notes

SUBSISTENCE SUPPLY. AR 31–16 contain provisions for establishment of standard prices for single manager controlled subsistence items. AR 31–17 prescribe responsibilities with respect to budgeting for requirements of the Single Manager Subsistence Supply System controlled by the Army Quartermaster General. Identical regulations are issued for Navy, Marine Corps and Air Force.

TRAVEL VOUCHER PAYMENT. AR 35–3070 cover payment of vouchers claiming reimbursement for travel allowances on permanent change of station, temporary duty, discharge, relief from active duty or retirement with pay.

JOINT PERSONNEL UTILIZATION. AR 616–45 establish policy concerning utilization of Army personnel in joint, nondefense and interservice support activities. Procedures are outlined for collecting data in such activities, including administrative and logistic support functions. The regulations apply to all TD and TOE activities, world-wide (except AAA units), which perform a function for another service or agency.

AUXILIARY CHAPLAINS. AR 165–35 establish procedure for employment and payment of civilian clergymen as auxiliary chaplains in the continental United States. Commanders of major commands outside the United States will adopt such provisions as are applicable.

PRISONERS. AR 633–5 prescribe uniform procedures for administration, treatment, disposition and rendering of reports on prisoners at Army installations.

UNIFORM STOCK FUND. AR 37–65 establish uniform stock fund policies and accounting principles to govern return of materials, supplies and equipment to the Army Stock Fund. They are applicable to all transactions recorded following 1 July 1956.

SEPARATION. AR 635–205 set forth conditions under which enlisted personnel of the Army may be discharged or released from active military service, or released from military control, for the convenience of the Government.

RIFLE, PISTOL COMPETITION. AR 145–395 provide guidance for instruction with rifle and pistol at educational institutions maintaining units of the ROTC and others that conduct military training under supervision of the Department of the Army.

ARMY AVIATION. AR 600–105 prescribe and implement a career program for personnel management of aviation officers.

AWARDS. AR 672–70 describe three awards available for distribution to units in recognition of outstanding achievements in the Army savings bond program. They are the Minuteman Award, the Secretary of the Army United States Savings Bond Award, and the Minuteman Flag.

COMPTROLLERS. AR 10–82 prescribe the role and functions of comptrollers other than those of the Comptroller of the Army.

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TV-Equipped Aerial Drone— Aid to Ground Commanders

A TELEVISION pickup system utilizing an aerial drone has been developed by Army Signal Corps to aid combat commanders in obtaining immediate evaluation of ground conditions.

The pilotless system consists of an L–17 aircraft modified for television photo-drone operation, an auto-pilot which provides effective remote control by means of on-off type radio signals, and a ground control station that can be carried in a jeep.

Live TV shots can be made of strategic territory from the drone and then broadcast to a ground control station. Remote control operation has been tested over a 25-mile area. However, the operational range will be governed by the range of the radar tracking system, making possible "instantaneous ground evaluation" with broad potentialities.

The system's 250-pound ground station is weather- and shock-resistant. Signals transmitted from the ground station to the airplane's 42-pound auto-pilot regulate stability, altitude and air speed. Complying with remote commands, the aircraft will maneuver, climb, or glide. Special control provisions prevent stalls, over-speeding, excessive loss of altitude and other hazardous conditions.

Upon completion of the drone's mission, the ground controller flicks an "approach" switch which automatically positions landing gear, flaps, propeller pitch and power in proper sequence for approach and landing.

See back cover for close-up view of ground control station, and operational concept of the TV-equipped drone.


TP25